

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

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The South's Honor Not For Sale

The suggestions made here and there that the sentiment of the South for or against European countries in this world cataclysm is for sale to the highest bidder for its cotton; that this sentiment will be influenced not by the eternal verities of the situation, not by the South's views as to right and wrong, but by the price for which it can barter its cotton, is the grossest insult ever offered to a great people.

Do those who suggest such things believe that the South places a bale of cotton above its honor? Do they believe that the South esteems a temporary financial loss, however hard to bear, as justification for selling its soul to the Devil?

In this we take no account of the sentiment for or against the Allies or for or against Germany, but merely the suggestion that the South would so lightly value its honor as to barter it away for money and become in thought, if not in act, a bribe-taker from whomsoever it could secure the highest bid.

Perish forever such a slander upon the South, whether made directly or indirectly by Southern men or by men of other lands.

The South's honor is not for sale.

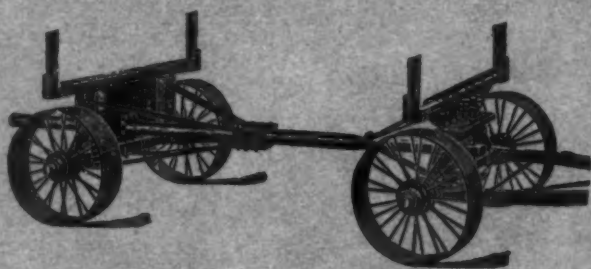
BALTIMORE, AUGUST 12, 1915



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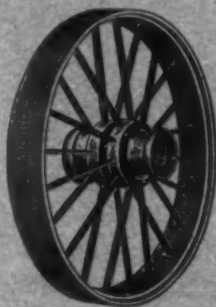
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MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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DON'TS FOR THE COTTON GROWERS OF THE SOUTH.

DON'T be misled into selling your cotton at five or six cents a pound, as you were last fall, by political and other pessimists.

Don't get frightened and rush your cotton to market except to the extent that you have to sell it to meet your financial obligations, for the undue crowding of cotton on the market plays into the hands of the speculators, who by the tactics now being employed would break down the price of your cotton and enable them to buy it to their profit and to your loss, as they did last year.

Don't expect either this Government or any other to buy your cotton. The Government has no more right to buy cotton than to buy grain or hogs.

Don't look for any uneconomic and impossible legislation in behalf of cotton, for most of the theories advanced have bordered on asininity, and some of them have quite reached that stage.

Don't for a moment think that you can barter your honor and your soul and shape your convictions as to right or wrong in world affairs for the price of a bale of cotton.

Don't seek to blackmail other countries by threatening retaliation because their work may interfere with the temporary selling price of your cotton.

Don't permit politicians or others to hold you up before the world as willing to accept a bribe, and to shape your judgment of right and wrong in human affairs by the price that this country or that might be willing to pay for your cotton.

Don't forget that though you have raised more cotton than the South ought to have produced, there is an intrinsic value in cotton which cannot be permanently destroyed.

Don't forget that you can carry your cotton for years without its deterioration, and that the time will come, unless the South continues to grow more cotton than the world demands, when every bale of cotton will be needed at a good price.

Don't defraud your creditors by refusing to sell cotton to meet your obligations, but when you have sold enough to pay your debts, don't forget that the balance is yours to hold until doomsday if you please, and await the time when the world will pay your price for it.

Don't, above all else, permit yourself to be misled into believing that your cotton is worth more than your honor; that your cotton must set your standard of morals in studying world affairs.

Don't forget that he who poses the cotton growers of the South before the world as beggars asking alms, or as regarding a bale of cotton of more value than human life, or the price of a pound of cotton more to be considered than individual and national honor, is the worst enemy which the South has ever had or ever can have.

BUILDING GREAT METALLURGICAL PLANTS IN RECORD TIME.

THE Baldwin Locomotive Works, which for more than half a century has been one of the noted industrial institutions of America, having a capitalization of \$40,000,000, is, by reason of the demand from Europe for war supplies, building a new plant of immense proportions, which is being constructed in record-breaking time.

As an outcome of arrangements made by this company with other companies for the utilization of its facilities in the manufacture of war materials, the company will secure, practically without cost, what will doubtless be the largest and best-equipped locomotive works in the world; and in addition thereto a very large cash profit. In the ordinary course of the country's development it would have been many years before the Baldwin people would have felt justified in building such a vast plant, considering the plant which the company now owns in Philadelphia, which, during times of business activity, employs nearly 19,000 men, most of whom are skilled mechanics.

What the Baldwin company is doing in the way of securing one of the most modern plants of the world is typical of what is being done by many of the other leading industrial concerns of the East and the West. The Bartlett-Hayward Company of Baltimore, for instance, as recently stated, will, as a result of a war contract, secure a plant vastly larger than it would have been feasible for that company to build for years to come. This condition is pre-eminently true throughout New England, where many of the long-established institutions of that section are being equipped with modern machinery or are enlarging their plants or building new plants out of the profits of this business. The iron and steel and kindred interests of the East and West are thus being lifted to a higher plane than would have been possible for many years in the ordinary course of the country's growth. The men who are modernizing their plants or building new plants are among the ablest business men of the country. They are not taking risks. They are making contracts which show a profit which more than pays for these new plants; and thus this expansion of industry is being brought about without the investment of new capital on the part of Eastern and Western concerns who are taking the lead in this work.

Speculation in war stocks may run wild and conservative bankers and financial authorities may very justly warn the country against the wild gamble in securities now under way; but the men who are building these plants are not the gamblers in securities, nor will these new plants be affected even should there come a collapse in the gambling mania in the war stocks.

If the South does not utilize this opportunity, it will find itself decades behind the East and the West in the development of its metallurgical interests, for a generation will pass before the South under ordinary circumstances will be able to make progress in iron and steel and kindred pursuits commensurate with that which is being made by the East and West, based on the enormous demand from Europe for munitions of war. Moreover, the officials in this country are necessarily very deeply interested in the building of these plants, for they recognize that they safeguard our own future to an extent that would not have been deemed possible twelve months ago. Without the building of these new works of many kinds and in many places this country would have been hopelessly and helplessly unable to meet any important nation in war. It would have taken a year or more in which to build the plants in which to make the munitions of war for our defense, and in

that time we could have been so badly overrun as to be made to pay a forfeit for our unpreparedness great enough to tempt the cupidity of some of the nations of the earth. A war indemnity running far into the billions could have been demanded of us and we would have been compelled to pay it, because the trained soldiers of other countries would have been able to take possession of the leading centers of the country. Naturally, therefore, the Government officials are looking with interest to the work which is being done by many of the foremost concerns of the country in building plants especially equipped for making of war munitions.

In order to give the South a fair conception of the magnitude of some of these plants and the rapidity of their construction, we are giving in this issue a story of the plant that is being built by the Baldwin Locomotive Works which is typical of the magnitude of the plans that are being worked out by many of the big industrial concerns of the country.

WONDERFUL CROPS OF GRAIN AND FOODSTUFFS.

THE greatest grain crops in the aggregate ever produced in this country will be the record for this year, according to the August report of the United States Department of Agriculture. The estimate of yield, based on the condition of August 1, shows a considerable improvement in some respects over the estimate made in July. In some States there has been a decrease due to weather conditions, and in others a marked increase. Oklahoma, for instance, is now credited with a probable yield of 106,000,000 bushels of corn, or 26,000,000 bushels more than was indicated on July 1, and this in comparison with a crop of 50,000,000 bushels in 1914. The output of corn in Texas is estimated at 168,900,000 bushels, or a gain of upwards of 10,000,000 bushels over the estimate for July. Virginia shows an increased estimate of 3,500,000 bushels of corn, and North Carolina 2,100,000 bushels. On the whole, the South shows up remarkably well.

As indicated in the MANUFACTURERS RECORD of July 15, the value of the wheat crop this year will probably exceed \$1,000,000,000, and the total value of all crops promises to run beyond \$10,000,000,000.

Taking the yield of the main grain crops of the country, based on August condition, and compared with the final outturn of the crops in 1914, we have the following:

	August forecast.	1914 crop.
Wheat	966,000,000	891,000,000
Corn	2,918,000,000	2,673,000,000
Oats	1,402,000,000	1,141,000,000
Barley	217,000,000	195,000,000
Rye	44,000,000	43,000,000
Buckwheat	18,000,000	17,000,000
Rice	30,000,000	24,000,000
	5,595,000,000	4,984,000,000

These figures show an indicated aggregate yield of 5,595,000,000 bushels for the year, or an increase of 611,000,000 bushels over the crop of 1914.

While grain has thus made this remarkable increase, there is also an increase in white potatoes of 25,000,000 bushels, the yield this year being reported at 431,000,000 bushels. Of sweet potatoes this year's crop is estimated at 63,000,000 bushels, a gain of 6,000,000 bushels over last year. In hay there is an increase of 5,000,000 tons, the total yield of this year being 75,000,000 tons, while apples show a decrease, but peaches an increase.

With such abounding crops we have the foundation for great agricultural prosperity, and this should mean prosperity for all other interests.

IRON PRODUCTION FOR THE FIRST HALF OF 1915.

DURING the last few months there has been a very rapid improvement in the iron and steel trade of the country. For the first six months of the year the production of pig-iron was 12,233,791 tons, but we are now running on the high-water mark basis of 32,000,000 tons a year. The production for the first half of the year showed an increase of 1,437,000 tons over the second half of 1914, but a decrease of 300,000, as compared with the first half of 1914. The heavy depression in iron and steel last year, which continued during the latter part of the year with increasing intensity, has recently given way to a great burst of activity, and now the country seems to have entered upon a period of widespread activity and prosperity in iron and steel and in all the interests dependent upon them. It is true that this has largely come about through the demand from Europe for war supplies. These orders have resulted in the erection of many large buildings, in increased shipbuilding activity and in other improvements which have brought about this sudden burst of betterment. As yet there is no marked improvement in the railroad situation. Railroad building is practically dead, and comparatively few orders are being given for railroad supplies, locomotives or cars, such as might be expected in times of ordinary business activity.

The statistical bulletin of the American Iron and Steel Institute gives the production of pig-iron for the first six months of the year as compared with the preceding six months, and with the first six months of 1914 as follows:

HALF-YEARLY PRODUCTION OF ALL KINDS OF PIG-IRON.

States.	Production—Gross tons. (Includes spiegel-eisen, ferro-mang., ferro-silicon, ferro-phosphorous, etc.)		
	First half of 1914.	Second half of 1914.	First half of 1915.
Massachusetts	4,292	2,302	3,087
Connecticut	818,425	741,439	921,566
New York	5,207,051	4,526,318	5,199,421
Pennsylvania	101,605	93,989	85,673
Maryland	164,796	106,432	105,244
Georgia	902,186	924,743	868,341
Texas	136,742	99,651	79,228
West Virginia	113,137	103,601	82,992
Kentucky	2,865,367	2,418,059	2,964,211
Mississippi	1,045,905	801,546	801,951
Tennessee	851,700	705,655	854,375
Ohio	195,991	133,535	130,514
Wisconsin	128,897	138,580	137,188
Minnesota	158,162	150,121	161,593
Missouri	158,162	150,121	161,593
Colorado	158,162	150,121	161,593
Washington	158,162	150,121	161,593
California	158,162	150,121	161,593
Total	12,536,094	10,796,150	12,233,791

HALF-YEARLY PRODUCTION OF COKE PIG-IRON.

States.	Production—Gross tons. (Includes spiegel-eisen, ferro-mang., ferro-silicon, ferro-phosphorous, etc.)		
	First half of 1914.	Second half of 1914.	First half of 1915.
Massachusetts	4,292	2,302	3,087
Connecticut	818,425	741,439	921,566
New York	5,207,051	4,526,318	5,199,421
Pennsylvania	101,605	93,989	85,673
Maryland	164,796	106,432	105,244
Georgia	902,186	924,743	868,341
Texas	136,742	99,651	79,228
West Virginia	113,137	103,601	82,992
Kentucky	2,865,367	2,418,059	2,964,211
Mississippi	1,045,905	801,546	801,951
Tennessee	851,700	705,655	854,375
Ohio	195,991	133,535	130,514
Wisconsin	128,897	138,580	137,188
Minnesota	158,162	150,121	161,593
Missouri	158,162	150,121	161,593
Colorado	158,162	150,121	161,593
Washington	158,162	150,121	161,593
California	158,162	150,121	161,593
Total	12,536,094	10,796,150	12,233,791

ANTHRACITE AND MIXED ANTHRACITE AND COKE PIG-IRON.

New York	57,507	33,957	42,487
Pennsylvania	57,507	33,957	42,487
Total	57,507	33,957	42,487

HALF-YEARLY PRODUCTION OF CHARCOAL PIG-IRON.

Massachusetts	4,292	2,314	3,087
Connecticut	1,853	1,373	1,814
New York	1,466	2,233	95
New Jersey	8,319	11,839	14,896
Pennsylvania	225	3,169	204
Maryland	106,203	88,496	98,856
Virginia	21,409	10,713	10,544
Alabama	143,767	120,157	129,496
Georgia	143,767	120,157	129,496
Texas	143,767	120,157	129,496
Kentucky	143,767	120,157	129,496
Tennessee	143,767	120,157	129,496
Mississippi	143,767	120,157	129,496
Ohio	143,767	120,157	129,496
Michigan	143,767	120,157	129,496
Wisconsin	143,767	120,157	129,496
Minnesota	143,767	120,157	129,496
Missouri	143,767	120,157	129,496
Colorado	143,767	120,157	129,496
Washington	143,767	120,157	129,496
California	143,767	120,157	129,496
Total	143,767	120,157	129,496

TOTAL PRODUCTION OF PIG-IRON ACCORDING TO FUEL USED.

Coke	12,334,820	10,642,036	12,061,808
Anthracite*	57,507	33,957	42,487
Charcoal	143,767	120,157	129,496
Total	12,536,094	10,796,150	12,233,791

*Includes mixed anthracite and coke pig-iron.

It is to be regretted that, notwithstanding the increase of more than 1,400,000 tons of pig-iron during the past six months as compared with the preceding six months, there was a very considerable decrease in the South. In Maryland there was a falling off of 8300 tons; in Virginia, 1200 tons; in Alabama, 56,000 tons; Kentucky, 20,400 tons; Tennessee, 20,700 tons.

The South, as indicated by these figures, was late in catching the spirit of activity prevailing elsewhere, but now there are many signs of betterment in the South's iron and steel interests.

WORLD'S PRODUCTION OF PETROLEUM IN 1914.

THE quantity of petroleum entering the markets of the world in 1914 amounted to 400,483,489 barrels, according to statistics compiled under the supervision of J. D. Northrop of the United States Geological Survey.

Of this record-breaking output, the United States is credited with 66.36 per cent., representing in quantity a trifle less than double the output of all the other oil-producing countries combined.

The following table shows the marketed production of petroleum in the world in 1914, and for purposes of comparison the corresponding output in 1913, together with the total output from 1857 to 1914, inclusive:

WORLD'S PRODUCTION OF PETROLEUM IN 1913 AND 1914 AND TOTAL PRODUCTION 1857-1914, WITH PERCENTAGE OF PRODUCTION BY COUNTRIES, IN BARRELS OF 42 GALLONS.

Country.	1914.		1913.		Total from 1857 to 1914.	
	Pro- duction.	Per- centage.	Pro- duction.	Per- centage.	Pro- duction.	Per- centage.
United States	265,762,535	66.36	248,446,230	64.59	3,335,457,140	83.03
Russia	67,020,522	16.74	62,834,356	16.34	1,622,233,845	40.50
Mexico	21,188,427	5.29	25,902,439	6.73	90,359,869	2.26
Roumania	12,826,579	3.20	13,554,763	3.52	117,982,474	2.94
Dutch East Indies	*12,705,208	3.17	11,966,857	3.11	138,278,392	3.45
India	18,000,000	4.50	7,930,149	2.06	73,979,919	1.85
Galicia	15,033,350	3.75	7,818,130	2.03	131,873,601	3.29
Japan	2,738,378	.68	1,942,000	.51	27,051,158	.68
Peru	1,917,802	.48	2,133,261	.55	14,306,972	.36
Germany	1,995,764	.50	1,995,764	.50	12,965,569	.32
Egypt	777,038	.19	94,635	.02	1,066,728	.03
Trinidad	643,533	.16	503,616	.13	2,069,430	.05
Canada	214,805	.05	228,060	.06	23,493,610	.59
Italy	39,548	.01	47,256	.01	802,229	.02
Other countries	\$620,000	.16	\$270,000	.07	1,222,000	.00
Total	400,483,489	100.00	384,667,550	100.00	5,503,262,336	100.00

*Includes British Borneo.

†Estimated.

From 1857 to 1914 the world's total production was 5,503,262,336 barrels, of which the United States produced 59.63 per cent.

INCREASING COTTON CONSUMPTION IN THE UNITED STATES.

THE consumption of American-grown cotton by American mills exceeded by over 147,000 bales the consumption of the preceding year. The takings, as distinguished from consumption, showed a gain of 744,000 bales over the preceding year. The North carried over an excess of 265,000 bales of cotton over its stock of American cotton of July 31, 1915, while the South carried over an excess of 308,000 bales. On that date the total stocks of American mills aggregated 1,498,000 bales, as against 925,000 bales for the same date last year.

The total amount of cotton grown by the South last year was over 17,000,000 bales, while during the same period, according to the annual report of Secretary Hester of the New Orleans Cotton Exchange, published elsewhere in this issue, the world's consumption of American cotton did not exceed 13,900,000 bales, showing a production 3,000,000 bales in excess of the world's consumption. Had there been no war there would have been a severe break in cotton prices last fall, and the South would have had to pay the penalty, which it always has to pay, when it raises more cotton than the world requires.

Notwithstanding the stagnation which existed in cotton manufacturing during last summer and early fall by reason of the general depression throughout the country and of the difficulty which mills had in financing their needs, the record for the year shows an increase in Southern consumption of 100,000 bales, putting this section far ahead of all other mills in the United States. The consumption of cotton by Southern mills for the year was 3,163,388 bales, an increase of 2,616,000 bales over 1890.

There are now 851 cotton mills in the South, including those under construction, with an aggregate of 13,346,480 spindles, a gain over last year of 147,000 spindles.

At the present time, with the cotton mills of the South running more nearly to full capacity than for several years, there is a tendency toward the building of new mills and the enlargement of existing plants.

During the year Northern mills consumed of American cotton 2,618,000 bales, or 545,000 bales less than the South consumed of American cotton, but there was imported during that period of foreign cotton 341,796 bales, counted in American average commercial weights of 517 pounds per bale. Of this foreign cotton 10,502 bales were consumed in Southern mills, Georgia using in one mill 3822 bales and North Carolina using in ten mills 6449 bales.

It is altogether probable that the coming twelve months will see a very large increase in the consumption of cotton in American mills, especially in Southern mills. Indeed, in June the consumption of Southern mills exceeded 300,000 bales, the maximum for the year.

THE SOUTH'S PSYCHOLOGICAL MOMENT

ARTICLES by eminent authorities have repeatedly made clear, particularly in the columns of the MANUFACTURERS RECORD, the overwhelming advantages of the South in the matter of raw materials for the development of great chemical industries. It is more than mere coincidence that these descriptions of our mineral resources have been presented in three groups of statements most fortunately timed as to their usefulness in the South's development.

No sooner had the wonderful work of the U. S. Geological Survey collected and elaborated the knowledge as to where and how useful minerals occur in the South than Dr. David T. Day placed these mineral treasures clearly in view in the Mining Exhibit of the Cotton States Exposition in Atlanta. He made it easy for the visitor to see either all the exhibits of a given mineral, such, for example as phosphate rock, from all the States grouped together, or he could see at a glance all the different kinds of minerals found in one locality.

It was this feat of placing together all the minerals which depend upon each other for their joint usefulness which first made evident the South's pre-eminence for chemical manufacture.

The same authority then began a series of convincing articles in this journal, pointing out the lines in which the South could compete in the world's chemical markets. Without question the raw supplies are plentiful. The question was to develop chemical manufacturing experts and ally them with sufficient capital.

At once an invitation was sent everywhere at home and abroad for the world's chemists to come to the South and develop this latent wealth. This invitation brought the chemical manufacturers in a body. At the time of the Eighth International Congress of Applied Chemistry an excursion was organized by Dr. George D. Rosengarten and Dr. Day, as his aide, which took over two hundred chemists and manufacturers as far west as Chicago, and from there over one hundred kept on to the Pacific Coast. They saw the wonderful deposits of salt and phosphate rock, etc., of the Utah valley and the chemical opportunities of San Francisco Bay. They went to Los Angeles and then turned east and began the study of the best last.

They saw the cotton and beef by-products at Fort Worth and kept on to Shreveport. It was in the profligate development of oil and natural gas in the Caddo field that they became convinced that the South is supreme in that essential of all development—fuel in its highest form. They saw sulphur, phosphates, salt, limestone, and they saw abundant water power for making nitric acid from the air. They even saw this actually being made.

Their verdict was printed all over Europe, and the opinions previously expressed in the MANUFACTURERS RECORD were amply substantiated.

But it is one thing to know where to manufacture and quite another to uproot existing factories, disturb trade relations, boom new social conditions and move to the new Eldorado.

But just as a great social upheaval gave us our entire population in the pioneer days of the Republic, so now the most awful catastrophe in the world's history has well-nigh destroyed chemical manufacture abroad.

A greater world misfortune still is the fact that the human plant—the chemical technologists themselves—have been destroyed. This is true not only in Germany, but equally so in England and Scotland, for it is becoming daily more evident that in Great Britain the aristocrats and highly-educated men, the professors and the technologists and their students have been the first to bear the brunt of England's warfare.

There is no longer need or occasion to invite foreign technologists to come to the South to develop our chemicals. There are many less foreign factories and many less foreign experts—not nearly enough to redevelop the needs of Europe in many years, let alone to ask them to supply the United States, even if the war were over, and the sad fact is it is *not*, and its probable length may not be foretold.

If the preparation for the South's chemical development had foreseen the present condition, the

work of our Government scientists in preparing the way for it could not have been better done. Nor could anyone imagine a condition more favorable than the present for contributing the South's overwhelming share to our own chemical industries. Consider one industry alone—a basal one—the manufacture of sulphuric acid. We have more sulphur available than we can possibly use. It is a glut on the market. The South can and largely does supply the world. But it is no longer practicable to ship sulphur abroad and reimport it in the form of sulphuric acid, and more especially in the form of hundreds of products, in the making of which sulphuric acid is necessary. It must be made at home. The price of sulphuric acid must rise, and with it there will be a more favorable market condition for sulphur itself. The same is true for many other chemicals.

To be sure, the prudent must be sure as to the future—what after the war. Manufacturers have been fearful of foreign competition. Foreign cheap labor has been the chief deterring influence.

There is no denying the justice of the plea made by Dr. Wm. H. Nichols and other eminent pillars of the American chemical industry against the foreign chemical trusts. While the United States wages relentless war against monopoly, the German Government does the reverse and aids by every possible means such monopolistic developments as will enable Germany to dominate international trade.

The one special means for throttling American development is not only dumping surplus products upon the American market, but the systematic underselling of any new product the manufacture of which threatens to become prosperous in America. Before another step is taken against big business in the United States it seems the paramount duty of Congress to assure the new industries, which should quickly come to the aid of this country, that they will not be abandoned to foreign trusts. There is a kind of domestic "protection" which is strictly democratic, which departs from the idea of a tax and applies democratic skill in "trust busting" to providing laws which apply to foreign trusts when they invade the "made-in-America" market.

How this can be brought about has been well shown by Dr. Nichols and many others, whose plans have been seasoned by many years of practice in building up American industries.

At this critical time, when the brilliant plan of the Secretary of the Navy calls to the protection of the country a commission of the greatest American inventors and technologists, it is opportune to convolve also the American manufacturers to fortify the United States against the further invasion of American trade by the forces of unfair trusts who now freely operate under methods which this country prohibited for our own manufacturers years ago.

Let it be to the credit of this administration to protect American interests by law against foreign trusts. Fairness to America first!

When this is done (and the necessary modifications to our present laws are slight), the one great obstacle to the Southern chemical development will disappear. More than the old land of promise to the foreigner, the South will become the seat of our own industries. It has cheap fuel, cheap labor, cheap water power, plentiful raw materials and security from domestic trusts. It now needs and has the right to demand safety for its investors against the invasion of international trusts.

Never was skill in trust legislation more needed, never was systematic method of efficient trade legislation better known. It is in the hands of the friends of Southern development, and while they are advancing the South's prosperity, they are solidifying the whole nation's industries, and they will add to capital the one thing lacking—national confidence.

DOES HE THINK THE NORTH CAN BE BRIBED?

THE South has usually spent about \$400,000,000 of its earnings from the cotton crops in the North every year. If the planters don't make any money they will have none to spend, and the North is going to feel it.—Senator Hoke Smith in New York Evening Mail.

Does Senator Smith offer this as a bribe to the North to favor his scheme of retaliation?

THANKS GOD FOR NATIONAL AND LOCAL PROSPERITY.

THE Herald of Gainesville, Ga., referring to the work of one of the pessimistic papers of the South which gave as an indication of lack of prosperity a decrease in the advertising business of Southern papers, makes the following vigorous reply:

An editor who can't take a broader view in reporting a situation than that which affects him personally is unfit to edit a paper and his paper is unworthy of public patronage.

We confess that the Herald, together with all other weekly papers, and possibly the dailies as well, has suffered from a decrease in business, but we can look forward to a return of prosperity that will bring with it benefits that will overcome past losses, for when the country prospers newspapers will likewise prosper.

We can look beyond our own 30 per cent. loss in patronage at the more than one-billion-dollar trade balance during the fiscal year just closed; we can view with clear vision the unprecedented prosperity that the country at large is enjoying; we can proclaim the joyous fact that the American dollar is at a premium throughout the world; we can publish with pride that the United States has become the financial mistress of the world, succeeding Great Britain in that proud position that she has occupied for a century past; we can print with local pride that since the first day of January something like a quarter of a million dollars in construction work has been done, or has been contracted for, in our own city, that a hosiery mill has been established, and crowned with immediate success, and has within the last month been forced to double its capacity in both machinery and operatives to fill its orders; we can say with pleasure that every mechanic in the city is employed; we can herald the fact that no failure has occurred among our local business men during the period of this so-called depression, and, thank God, we can say these things in spite of the fact that the newspaper that we have the honor to edit has suffered a decrease of 30 per cent. in its advertising during the last twelve months.

A FUTURE COTTON SHORTAGE.

THERE will be an enormous demand for cotton as soon as peace has been restored in Europe, in the opinion of Sir Charles Wright Macara, Chairman of the English Cotton Spinners' Association. He believes that unless production is kept up to normal the result will be a disastrous shortage, and suggests the hoarding of a great reserve, with the British and American Governments encouraging production by guaranteeing planters against loss.—N. Y. Annalist.

It is quite possible that there may ultimately be a shortage, but since no one can say how long the war will last, the duty of the South is to raise its own foodstuffs first and make cotton a surplus crop. This Government has no right to guarantee prices to Southern planters, and we don't believe the British Government will do it. If Mr. Macara wants to safeguard English mills, let him have them do the buying in the open market and stock up for the future. That is the only basis for economic safety.

"WASTING MONEY ON NEWSPAPERS."

YOU will smile at the "cheek" and "gall" displayed in the following letter, but the shame and pity of it is that it is not exceptional and rare. The editor of a Kentucky weekly some time ago received this letter: "Please send me a few copies of the paper containing the obituary of my aunt. Also publish the enclosed clipping of the marriage of my niece, who lives in Lebanon. And I wish you would mention in your local column, if it does not cost anything, that I have two calves for sale. As my subscription is out, please stop my paper. Times are too bad to waste money on newspapers."—Biblical Recorder, Raleigh, N. C.

Smile at the "gall" of such a letter! Not a bit of it. Every newspaper gets letters of that kind once in a while. They come from people who would be mean enough, if they could find it, to steal ice from Hades.

"THE PRAYER OF EVERY HONEST AMERICAN."

Greensboro, N. C., August 2.

Editor Manufacturers Record:

Permit us to compliment you on the article that appeared on the front cover of your July 22 issue. An existing spirit of this kind is the one great secret of our unmatched United States, and if every citizen were to do this, instead of knock or criticize Uncle Sam's policies, this country could be looked upon, indeed, as one to pattern after. "A kingdom cannot be divided against itself and stand." Yours very truly,

STEEBLING FURNITURE CO.

As Others View the Cotton Situation

THE PRICE OF COTTON AND THE PRICE OF AMERICAN LIVES.

[From the New York Herald, August 10.]

Mr. Hoke Smith of Georgia, United States Senator, Governor of Georgia for two terms and a member of President Cleveland's Cabinet during his second term, might be supposed to represent actually the sentiment of the Southern people. He professes to do so, and will make a speech at the Biltmore Hotel tomorrow before an organization of importers, which, unless challenged, will be taken in some quarters as representative of Southern thought and impulse.

What Senator Smith will say tomorrow is a matter of conjecture, but if his utterances in last night's Evening Mail, which, simultaneously with the publication of that interview, under the signature of its editor dropped all subterfuge and came out as a sympathizer with Germany, are to be taken as an example, he will tell the importers, in effect, that the methods being pursued by Great Britain and the Allies in interrupting cotton shipments destined for Germany are worse than those pursued by Germany in her submarine warfare on commerce which has cost so many American lives.

We have never seen any statement from Senator Smith approving the notes sent to Germany by the State Department regarding the Lusitania and other outrages. We have seen statements from him disapproving those notes, and therefore it is safe to say that he regards Great Britain as worse than Germany. There is no intent to do Senator Smith an injustice. But he did sneer at the President's Lusitania position and yesterday he insisted that the President "must" inform Great Britain that she must permit cargoes to go through or the United States would "omit no word or act" to send them through, and that if there is further interference this Government will consider the act "deliberately unfriendly."

So much for Senator Smith's position. He would have us go to war with the Allies over cotton. There is no dodging that. It is the position of a man who has gone cotton crazy. Mr. Ridder or Dr. Dernburg could not go so far.

Now, in order to put the New York public on its guard, as well as to do justice to a great and splendid section of this country, the Herald ventures to say that, while Senator Smith may be the titular representative of the State of Georgia in the Senate, he is not in any sense a representative of Southern sentiment. He represents a class composed primarily of cotton speculators. The same men, according to the Vicksburg Herald, which Senator Smith must admit is fairly representative of a cotton section, got up a fake six-cent cotton calamity howl last autumn, when, according to the Vicksburg Herald, many were "scared into sacrificing their cotton." According to the Savannah Press, which represents the greatest seaport in Georgia, the cotton agitation which Senator Smith is assisting "places this section (Georgia) in the position of blindness to the moral difference between human blood and the price of cotton." On the same subject the Manufacturers Record of Baltimore devoted to the development of the South, said recently:

"The South is in danger of worshipping cotton instead of worshipping the Almighty; we are in danger of sacrificing honor, integrity of character and all that makes for human advancement for the price of a bale of cotton. Around the neck of the South hangs like a curse a bale of cotton."

"What shall it profit the South if it shall gain the whole word (for its cotton) and lose its own soul?"

Senator Smith and his associates were the other day the subject of a sermon preached by the Rev. Dr. M. Ashby Jones of Augusta, Ga. Dr. Jones is the son of a noted Confederate chaplain under Stonewall Jackson and is representative of the best life in the South. He said:

"To translate this teaching into terms of our pressing problem we must ask, How much, then, is a man of more value than a bale of cotton?"

"The cry is going up that the South is being made to suffer for a fight which is none of hers. But had we not better clearly understand that this fight is ours and upon its issue our destiny is deeply involved with the rest of the world?"

With these quotations it is well to leave Senator Smith to pursue before the New York importers his efforts to mislead the North as he is seeking to mislead the South.

But this much can truthfully be said. The editorial columns of the Southern newspapers reveal that section of the country standing loyally behind the President, and their discussions fail to show that they in any sense support Senator Smith in his efforts to make the question a great moral issue over which he would lead us to war.

The Southern editors were shocked at the enormity of the outrages inflicted by Germany on Americans without warrant of law, and they are deliberately refraining from regarding the British interference with commerce as an outrage calling for an ultimatum. Senator Smith has not blunted the moral sense of the South. He has only blunted his own.

WHAT THE MONEY OF THE ALLIES DID.

[Staunton (Va.) Leader.]

The Baltimore MANUFACTURERS RECORD has been of immense service to the South in placing before the world reliable information concerning material conditions in our section; but it has never performed a more signal service than when it brought to the attention of the world in so striking a manner the astounding fact that the grain crop of the South this year will be worth several hundred million dollars more than the cotton crop. We have heard so much of the preachment to the South that it should grow its own grain and meat, even Southerners had grown accustomed to accepting as a fact that we bought everything we ate from the North and the West. It has been a common saying, never before seriously challenged, that the South keeps its smoke-house in the West.

The truth of the statement made by the MANUFACTURERS RECORD has not been challenged, for the patent reason that the MANUFACTURERS RECORD has the Department of Agriculture to support it in all its claims. How absurd, therefore, for any Southerner, seeing that the South grows so much in the way of foodstuffs, to become panicky with reference to cotton, which, by the way, is now bringing a very satisfactory price. Some Southerners have been so wrought up over the detention of a few shiploads of cotton by the British that they have been ready to have our Government declare war at once against the Allies. If they would take a deeper look into conditions they would realize that it was the money of the Allies that brought the price of cotton up from the very low state it reached at the beginning of the war, and that if serious complications should arise cutting off this market for cotton, the price would go lower than it did at the beginning of the war.

The South is faring well, as things now stand, and the wise course for Southerners to pursue is to forget the politicians for awhile and proceed quietly about their business. In this they will find profit.

THE GREATEST MISTAKE THE SOUTH EVER MADE.

[From the Mobile Item, July 30.]

The Birmingham Ledger, which had a hand in promoting the buy-a-bale movement, says it was "the most successful and practical movement ever made." Everybody else, including The Item, that had any share in that movement realizes now that it was just about the greatest mistake that a lot of well-meaning people in the South ever made. It put the South in the attitude of a lot of mendicants, asking for charity, and utterly failed to accomplish any good proportionate to the degrading blow which it dealt to Dixieland in the eyes of the world. The South is the most fertile of all sections of the United States. It can and will finance itself without special concessions of any kind from anybody.

The movement to get the help of the United States Government to make the warring countries let cotton go through to all ports is just such another "buy-a-bale" mistake. Why should the proud South go on its knees and ask that its products be given any different Government help than is given to any other products from any other section?

LETTERS FROM READERS OF THE MANUFACTURERS RECORD.

Charles Catlett, chemist and geologist, of Staunton, Va., writing under date of August 6, says:

I have been reading with much interest and pleasure your recent articles in regard to some of the hysterical utterances which have emanated from the South. I confess the latter at times makes me heartsick and apprehensive for the future of that section. But it cannot be other than some temporary strabismic condition of the mind, which your vigorous editorials can do much to straighten out.

Major Douglas F. Conoley of Tampa, Fla., president of the Bank of Clearwater, in writing under date of August 5, says:

I have read your New York Herald article with much satisfaction, pleasure and profit.

I think the last issue of the MANUFACTURERS RECORD was particularly good. The cover page, the cartoon, and the article "Where he Went," by Ridgway, were real gems.

John M. Miller, Jr., vice-president of the First National Bank of Richmond, Va., in writing under date of August 3, says:

I have read with much interest your article of several days ago in the New York Herald referring to the situation in the Southern States, and I wish to congratulate you on its tone.

The cartoon reprinted from the MANUFACTURERS RECORD of July 29, 1915, entitled "Neither Time Nor Place for Pessimism," is a splendid reminder of the situation.

Morris W. Bush, president of the Shelby Iron Co., Birmingham, writing August 8, says:

I have been out through the country districts a great deal this summer and have never seen as fine prospects for corn and other crops. It seems to me that no matter what price cotton sells for this fall, the South will be in good shape. It is also a fact that what cotton is made will be made cheaper than for a number of years.

I have read with a great deal of interest your article in the New York Herald on the cotton situation. I heartily approve of your position on this question.

W. E. Austin, president of the W. E. Austin Machinery Co. of Atlanta, writes:

Your article and illustration, "Neither Time nor Place for Pessimism," page 33, of your issue July 29, hits the nail on the head so far as the South is concerned, and it should be given all publicity possible.

T. B. Williams, secretary Waldo Board of Trade, Waldo, Fla.:

I want to express my keen appreciation for what I consider the best industrial editorials for the South that I have been able to get.

I deem it a great pity that the MANUFACTURERS RECORD does not get into the hands of every business man in our great Southland.

THE FRENCH OIL MILL MACHINERY CO.,

Piqua, O.

Modern Oil Mill Machinery.

Atlanta, Ga., August 7.

Editor Manufacturers Record:

Referring to the cartoon, "Neither Time nor Place for Pessimism," and also an article in New York Herald in reply to "Senator Hoke Smith's statement" as to the influences and conditions of cotton market, I have very little confidence in statements made by politicians, as we all know that a majority of the utterances is for political influence, among those who accept almost anything as being true without thought or investigation. For instance, our Congressman, Mr. Schley Howard, had a statement in Hearst's paper of this city which shows, like Governor Blease of South Carolina, that he is ignorant as to the real conditions existing between the United States and Great Britain for the last hundred years.

I agree with you perfectly in all that you have to say about the cotton situation. I believe you have rendered the South more substantial service than all of the Senators and Congressmen that have represented her for some time.

With best wishes for your success,

Yours truly,

W. P. FERGUSON.

The International Status of Cotton

A LEGAL REVIEW OF THE SITUATION FROM THE SOUTH.

By CHARLES E. CHIDSEY, Attorney-at-Law, Pascagoula, Miss.

During the past few months there has been much discussion and considerable hysteria in daily papers, and especially in the South, over the action of Great Britain in holding cotton shipments to foreign ports.

The status of cotton during the times of a civil or international war was written into the Laws of Nations by the Supreme Court of the United States in the cases known as "The Prize Case," 2d Black, 635-699 (17 Law Ed. 459), where Mr. Justice Grier said: "The right of one belligerent not only to coerce the other by direct force, but also to cripple his resources, by seizure or destruction of his property, is a necessary result of the state of war. Money and wealth, the products of agriculture and commerce, are said to be the sinews of war, and as necessary in its conduct as are numbers and physical force. Hence it is that the laws of war recognize the right of a belligerent to cut these sinews of the power of the enemy by capturing his property on the high seas." And then again, in *United States vs. Alexander* (2d Wallace, 404, 17 Law Ed. 915), the question arose over the seizure by Federal troops in Louisiana of 72 bales of cotton belonging to a citizen of that State, the State being in war with the Union. In upholding the action of the Government, Chase, C. J., said: "Being an enemy's property, the cotton was liable to capture and confiscation by the adverse party."

In the controversy with England and other belligerents over the shipments of cotton the question is, Is the cotton the property of one of the belligerents? and if so there is no doubt of the right of another belligerent to seize and confiscate it. If, on the other hand, the cotton is the property of a neutral, other and not less important questions must be solved before its fate can be determined.

The rights of neutrals in time of war have been written large into international law by the Supreme Court of the United States, and by its rulings this nation must stand or fall in its contentions with other nations. In the case of the *Bermuda Claimants vs. The United States*, 3 Wallace, 514, 18 Law Ed. 200, Chase, C. J., speaking for the court, said: "Neutral trade is entitled to protection in all courts. Neutrals in their own country may sell to belligerents whatever belligerents chose to buy. The principal exceptions to this rule are, that neutrals must not sell to one belligerent what they refuse to sell to the other, and must not furnish soldiers or sailors to either; nor prepare nor suffer to be prepared within their territories armed ships or military or naval expeditions against either. So, too, goods contraband of war or not conveyed with intent to violate a blockade, neutrals may transport to belligerents whatever belligerents may agree to take. And so, again, neutrals may convey in neutral ships from one neutral port to another any goods, whether contraband or not, if intended for actual delivery at the port of destination and to become part of the common stock of the country or port." And then again, in another part of the same opinion, this great lawyer said: "It is contended by counsel that British merchant as a neutral had, during the late Civil War, a perfect right to trade even in military stores, between their own ports, and to sell at one of them goods of all sorts, even to an enemy of the United States, with knowledge of his intent to employ them in rebel war against the American Government."

"If by trade between neutral ports is meant real trade, in the course of which goods conveyed from one port to another become incorporated into the mass of goods for sale to the enemies of the United States, is to be a sale to either belligerent without partiality to either, we accept the proposition of counsel as correct. But if he intended to affirm that a neutral ship may take on contraband cargo ostensibly for a neutral port, but destined wholly for a belligerent port, either from the same ship or by another, without becoming liable, from the commencement to the end of the voyage, to seizure, in order to the confiscation of the cargo, we do not agree to it."

That decision settles the right of the citizens of the

United States to sell goods of any kind, contraband or not, to a belligerent, contraband articles being subject to the right of a belligerent to seize and confiscate them, but articles which are not contraband are not subject to seizure and confiscation.

In another case the court lays down in clear and unequivocal terms what is and what is not contraband of war, the Chief Justice again speaking for the court:

"Of these classes (contraband goods) the first consist of articles manufactured and primarily used for military purposes in time of war; second, of articles which may be used and are used for purposes of war or peace according to circumstances, and the third of articles used exclusively for peaceful purposes. Merchandise of the first class destined to a belligerent country or places occupied by the army or navy of a belligerent is always contraband; merchandise of the second class is only contraband when actually destined to the military or naval use of a belligerent, while merchandise of the third class is not contraband at all, though liable to seizure and condemnation for violation of blockade or siege." (*The Peterhoff vs. United States*, 72 U. S. 28.)

One may see that if the Government of Great Britain contends that cotton, whether going to a neutral port or not, is destined to the military or naval use of a belligerent at war with Great Britain, then this Government must meet this contention by showing that it cannot or will not be so used, and that is a question of fact and not of law.

The fact that the articles are shipped to a neutral port will not mend matters if it is intended that the goods shall continue on until they come into the hands of the enemy of the belligerent. Chief Justice Chase, commenting on this, said: "The interposition of a neutral port between a neutral departure and a belligerent destination has always been a favorite resort of contraband carriers and blockade runners. But it has never prevailed when the ultimate destination is ascertained. A transportation from one point to another remains continuous so long as intent remains unchanged, no matter what stoppages or transshipments intervene." (*Bermuda vs. United States*, *ut supra*.)

Having appealed to the law of nations in our controversy with Germany, we must abide by that law in our dealings with other nations, and no question of expediency or in expediency must be permitted to intervene. In the opinion from which we have just quoted the great Chief Justice in rendering judgment against the United States said: "But in such cases, such as that now in judgment, we administer the public law of nations and are not at liberty to inquire what is for the particular advantage of our own or another country. We must follow the lights of reason and the lessons of the masters of international jurisprudence."

It is not the purpose to here inquire into the origin of law of nations, based as it is not upon written statutes but upon the eternal principles of equity common to all nations. "The law of nations," said Justice Grier, "is sometimes called the law of nature, and is founded upon the common consent and common sense of all nations."

"In the various notes which I have received from your excellency the right of a belligerent to establish a blockade of the enemy ports is admitted, a right which has obviously no value same in so far as it gives power to a belligerent to cut off the sea-borne exports and imports of his enemy. The contention which I understand the United States Government now puts forward is that if a belligerent is so circumstanced that his commerce can pass through adjacent neutral ports as easily as through ports in his own territory, his opponent has no right to interfere and must restrict his measures of blockade in such a manner as to leave such avenues of commerce still open to his adversary. This is a contention which his majesty's government feel unable to accept and which seems to them unsustainable either in point of law or upon principles of international equity."

The above is a quotation from Sir Edward Grey's note to the United States on August 4, and practically states nothing that has not already been recognized by

our courts as the fundamental principle of international law. That a neutral has a right to free and unlimited commerce with another neutral is not open to question when it can be shown the shipments of goods are intended for the neutral alone and are to become a part of the common stock of the neutral country; but if it is the purpose in transshipping them through a neutral port into the territory of a belligerent where they may or may not be used for the purpose of war, to injure a belligerent that is at peace with the neutral, they are subject to detention, and if it be shown that they are contraband or such goods that the belligerent may use against his enemy, to confiscation. In case of the *Bermuda Claimants* (70 U. S. 514) the court made this plain:

"The interposition of a neutral port between a neutral departure and a belligerent destination has always been a favorite resort of contraband carriers and blockade runners. A transportation from one point to another remains continuous so long as intent remains unchanged, no matter what stoppages or transshipments intervene."

In the case of the *Jecker vs. Montgomery*, 18 How. 114, the United States Supreme Court laid down this rule clearly and forcibly:

"Attempts have been made to evade the rule of public law by the interposition of a neutral port between the shipment from the belligerent port and the ultimate destination in the enemy's country; but in all such cases the goods have been condemned as having taken a course of commerce rendering them liable to confiscation."

In the case of *The William* (5 C. Rob. 395) that great maritime lawyer, Sir William Grant, said that the landing of the cargo and the payment of duties does not interrupt the continuity of the voyage where it can be shown that it is the intention not to make them the common stock of a neutral country, but to convey them on to a belligerent. This case has been cited with approval by Chancellor Kent and by the United States Supreme Court.

Sir Edward Gray contends that it is the right of Great Britain and her allies to cripple by whatever means she can use the power of her enemy, and in this he is sustained by the Supreme Court of the United States. In the *Prize Cases*, 67 U. S. 635-699, Justice Grier, in delivering the opinion of the court, said:

"The right of one belligerent not only to coerce the other by direct force but also to cripple his resources by the seizure and destruction of his property is a necessary result of a state of war. Money and wealth, the products of agriculture and commerce, are said to be the sinews of war, and as necessary in its conduct as numbers and physical force. Hence it is that the laws of war recognize the right of a belligerent to cut these sinews of the power of the enemy by capturing his property on the high seas."

This brings us back to the position upon which we stood at the beginning of this article, and which may be stated briefly as follows:

(a) If the property that is being shipped to a neutral is the property of a neutral and is to be used only by him, then it is not subject to detention or confiscation, unless it is clearly contraband of war.

(b) If the property shipped by a neutral to a neutral is intended to be reshipped to a belligerent it is subject to seizure and confiscation.

(c) A belligerent has the right to seize and confiscate the property of an enemy wherever it may be found.

(d) While international law does not recognize "paper blockades," it does recognize the right of belligerents, whenever they can do so, to police the high seas and to see that the ports of a neutral are not being used for the purposes of reconveying contraband or goods that may or may not be used by the enemy in his war upon his enemy.

If I have not misread Sir Edward Grey's note, he does not contend for the right to blockade neutral ports, but only to the right to prevent neutral ports from being made a base for the transshipments of supplies to the enemy. In the exercise of this right the belligerent has a right under international law to detain and examine cargoes destined for neutral ports and to intercept all goods intended for the enemy. As before stated, whether or not cotton can be used as a material for war, and whether or not the commerce intercepted is the commerce of the enemy or of a neutral are questions of fact, and each case must be decided upon its merits.

The Cotton Crop of 1914-15 Over 17,000,000 Bales

A REVIEW OF PRODUCTION AND CONSUMPTION FOR THE YEAR.

By COL. HENRY G. HESTER, Secretary of the New Orleans Cotton Exchange.

[The total cotton production of 1914-15 aggregated 17,004,000 bales, as shown in the figures below, but Colonel Hester deals in the main with what he terms the Commercial Cotton Crop. In referring to the panicky conditions existing last fall by reason of the war, he says conditions were intensified by "calamity howlers" who predicted all sorts of disasters.—Editor Manufacturers Record.]

The Commercial Cotton Crop of the United States for the year ending with the close of July, 1915, amounted to 15,108,011 bales, showing an increase over that of 1913-14 of 225,518 bales, an increase over that of 1912-13 of 1,001,895, and a decrease under that of 1911-12 of 1,000,078 bales.

The entire increase in the deliveries over last year was in Texas, which showed a gain of 12 per cent., while the "Other Gulf" and Atlantic States decreased, respectively, one and three-tenths and three and three-tenths per cent.

The figures (in round numbers) are: Texas over last year, 501,000; Other Gulf States (embracing Louisiana, Mississippi, Arkansas, Tennessee, Oklahoma, Missouri, California, Kansas, New Mexico) under last year, 56,000; the group of Atlantic States (including Alabama, North Carolina, South Carolina, Georgia, Florida, Kentucky and Virginia), under last year 219,000 bales.

The crop, which averaged middling, was largely of the medium grades; that is, without a superabundance of either higher or lower qualities.

The average price for middling cotton for the year was 7.94 cents per pound, comparing with 13.49 last year, 12.20 the year before, and 10.16 in 1911-12; and the average commercial value per bale was \$41.04, against \$68.06 last year, \$63.59 the year before, and \$51.45 in 1911-12.

The August valuation above is nominal, though based on actual sales of the remnants of old crop.

It was not until the new crop began to move more freely that the force of the panic brought about by the European war scare was realized; and, while the reopening of the Exchanges which were closed from July 31 to November 16 brought about a steadier feeling, it was some time after that before the demoralization was overcome. It was in October that the lowest figure of 6½ cents was recorded, but there were many sales made in the interior, in Texas especially, on the basis of 5½ and 5¾ cents per pound for middling.

In fact, while the Exchanges were closed, there was no regular market, and cotton was selling in the interior of the Texas and Gulf States at one price and in the States of the Atlantic seaboard at another. Conditions were intensified by "calamity howlers," who predicted all sorts of disasters.

It is hardly to be wondered at, therefore, that there was a sheer drop from an average value per bale of \$67 in July, 1914, to \$37 in October, or say, about \$30 per bale. By the time the Exchanges opened, the trade began to realize that we were facing a bumper crop, which promised to exceed all previous yields, but the worst had been witnessed, and, as reflected in the figures appended, while the outcome has been the reverse of favorable, it has proved better than anticipated.

Value of Commercial Crops.

The total value of the crop compared with the previous three years ended July 31 has been as follows:

	Bales	Values.
1914-15.....	15,108,011	\$593,432,978
1913-14.....	14,882,493	977,844,114
1912-13.....	14,106,116	866,185,562
1911-12.....	16,108,089	808,723,967

These values, which embrace the commercial crop, are for cotton only, and do not, of course, include the value of the cottonseed, which constitutes an important item. For example, the value of the crop for the past year, as stated, was \$593,432,978, to which, if the value of the cottonseed be added, we should have a total of \$749,384,978. Last year, the total value, including seed, was \$1,134,444,114. The seed crop of this year brought about the same as that of last year, so that the loss in total value was practically all in the cotton.

The quantity of old cotton remaining in the Cotton Belt at the close of this season is many times larger than ever before, though not much greater than has been generally expected, owing to the enormous pro-

duction and the unfavorable influences of the European war. The figures July 31 were about:

	This year.	Last year.
Southern mill stocks.....	651,000	343,000
Counted and uncounted interior towns and plantations.....	1,888,000	300,000
Total old cotton carried over in the South at close of season.....	2,539,000	643,000

Using these figures, the

ACTUAL GROWTH.

for the season 1914-15 was, approximately, as follows (in thousands of bales):

Commercial crop of 1914-15.....	15,108,000
Less old cotton from crop of 1913-14:	
Southern mill stocks.....	343,000
On plantations and at interior towns.....	300,000
	643,000
	14,465,000

Plus cotton of this year's growth carried over in interior July 31, 1915:	
Southern mill stocks.....	651,000
At counted interior towns.....	438,000
At uncounted towns and on plantations.....	1,450,000
	2,539,000

Actual growth 1914-15..... 17,004,000

Commercial Crop by States.

	1914-15.	1913-14.	1912-13.	1911-12.	1910-11.
Alabama.....	1,500	1,540	1,385	1,736	1,205
Arkansas.....	982	1,090	818	940	844
Florida.....	90	70	60	55	68
Georgia.....	2,440	2,465	1,915	2,875	1,850
Louisiana.....	422	460	330	402	270
Oklahoma.....	1,135	894	1,050	1,036	921
Mississippi.....	1,232	1,350	1,040	1,218	1,235
North Carolina, etc.....	878	902	972	1,191	790
South Carolina.....	1,325	1,475	1,270	1,730	1,225
Tennessee, etc.....	485	518	375	573	423
Texas.....	4,619	4,118	4,831	4,312	3,156
Total crop, bales.....	15,108	14,882	14,106	16,108	11,986

Cotton Takings by American Mills.

The history of American mills during the year was one of doubt and uncertainty at the outset, due to the outbreak of the European war, followed by a fairly active period with a recent slackening tendency.

The outcome has been that the mills and factories in the South have established a new high mark, exceeding last year's consumption (which was the largest up to that time) by one hundred thousand bales, while Northern consumption has been well up to its highest previous record for American cotton.

This relates to consumption.

Both North and South manufacturers have bought freely of low-priced cotton, their aggregate takings having reached 6,354,000 bales. The rosters are as follows:

Northern Takings and Consumption.

(American Cotton.) Year ending July 31. (In Thousands.)	1914-15.	1913-14.
Mill stocks, beginning year.....	582	591
Takings for year.....	2,883	2,562
Supply.....	3,465	3,153
Consumption, year.....	2,618	2,571
Mill stocks, close year.....	847	582

Southern Takings and Consumption.

(American Cotton.) Year ending July 31. (In Thousands.)	1914-15.	1913-14.
Mill stocks beginning year.....	343	358
Takings for year.....	3,471	3,048
Supply.....	3,814	3,406
Consumption, year.....	3,163	3,063
Mill stocks, close year.....	651	343
Total takings North and South.....	6,354	5,610
Total consumption North and South.....	5,781	5,634
Increase in Northern mill takings.....	321,000	
Increase in Southern mill takings.....	423,000	
Total increase in mill takings, North and South.....	744,000	
Increase in Northern consumption.....	47,000	
Increase in Southern consumption.....	100,000	
Total increase in consumption, North and South.....	147,000	

Thus the North carries over an excess of 265,000 bales over its stock of American cotton of July 31, 1914, while the South carries over an excess of 308,000, or say, together, an excess of 573,000.

In brief, the American mill stocks of American cot-

ton, including linters, on July 31 (in thousands) were:

	This year.	Last year.
North.....	847	582
South.....	651	343
Total North and South, July 31.....	1,498	925

A most interesting feature has been the rapid increase in the consumption of linters, which jumped from a monthly average of 26,000 bales during the first six months, to a monthly average of 40,000 during the second six months of the season. The linters included in the year's consumption was 395,000 bales, against 300,000 last year, an increase of 86,000 bales.

In the South the linter factories used 16,000 bales in August and September, while they used 54,000 in June and July.

In addition to the total of American cotton above noted, American mills consumed 222,398 bales of foreign cotton.

World's Consumption of American Cotton.

The last annual statement of consumption was for the 12 months ending August 31, and as war conditions in Europe made it impossible to obtain accurate data in reference to port and mill stocks on the Continent, the figures then given were only approximate. The change since of the cotton year brings the comparatives for last year and previous years in this statement to July 31, at which time there was no interference, so that the 1913-14 figures as herein given may be considered as accurate. The same cannot be said of this season's total, as the conditions which prevailed on the Continent in August last have changed but little in so far as obtaining statistical information is concerned. Mr. Thomas R. Ellison of Liverpool cables me his figures of mill stocks July 31 as "Great Britain 325,000 bales, including two hundred thousand American; Continent one million four hundred thousand, including one million American," but states that in so far as the Continent is concerned, with information so restricted, the figures can only be considered as a rough estimate.

The face of the figures, in table given in another column, indicates a consumption of American cotton, including linters, during this year, of 14,134,000 bales, but it is likely that this total includes 250,000 bales or more at Continental outports not included in the Visible Supply and not necessarily belonging to spinners, which outports under ordinary circumstances hold no stock of cotton.

If this amount were deducted it would point to a total world's consumption of American cotton for the year ending July 31, 1915, of not exceeding 13,900,000 bales.

The importation of foreign cotton during the year (less amount re-exported) amounted to an equivalent of 341,796 bales in American average commercial weights, 517 27-100 pounds per bale, against 257,973 last year.

Supply and Distribution of American Cotton.

(In Thousands.)	1914-15.	1913-14.	1912-13.
SUPPLY.			
Visible supply, August 1.....	1,671	1,325	1,671
Brought into sight.....	15,432	14,870	14,140
Total supply.....	17,103	16,195	15,811
DISTRIBUTION.			
Takings—			
American mills, North.....	2,883	2,562	2,498
American mills, South.....	3,163	3,063	2,562
Canadian mills.....	185	147	16
Mexican mills.....	41	31	2
Japanese, Chinese and East Indian mills.....	1,490	349	40
European mills.....	7,067	8,369	8,413
Total mill takings.....	13,819	14,512	14,432
Burnt.....	2	12	.....
Visible supply, close July:			
In America.....	1,212	338	25
In Great Britain.....	1,318	636	604
In Continent.....	762	637	431
Total distribution.....	17,103	16,195	15,730

*Includes consumption only. Actual takings of Southern mills, 3,471,000 bales; the difference between consumption

and takings remaining in the Cotton Belt and is counted as part of the old cotton carried over.
(Including American cotton taken from Liverpool for Japan, China and East India.)

Visible and Invisible Supply Close of July.

AMERICAN COTTON.

(In Thousands.)

	1915.	1914.	1913.
Mill stocks in United States, close July.....	1847	582	591
Mill stocks in Europe, close July.....	1,290	1,790	1,800
Total mill stocks, American.....	2,047	2,362	2,391
Visible supply, American.....	3,282	1,671	1,325
Total visible and invisible supply, close July.....	5,329	4,033	3,716

*See note below.

ALL KINDS.

(In Thousands.)

	1915.	1914.	1913.
Mill stocks in America, close July.....	1944	640	667
Mill stocks in Europe, close July.....	1,725	3,175	2,773
Total mill stocks, all kinds.....	2,669	3,815	3,440
Visible supply, all kinds.....	4,702	3,181	2,596
Total visible and invisible supply, close July, all kinds.....	7,371	6,996	6,036

Mill stocks in the United States embrace Northern mills only. The stocks held by Southern mills, July 31, are counted in the old cotton left over in the Cotton Belt and are not included in the commercial crop.
*European mill stocks are estimates per cablegram from Mr. Thomas R. Ellison, Liverpool, and are subject to revision account war conditions.

World's Consumption of American Cotton for Past Three Years Ending July 31.

(In Thousands.)

	1914-15.	1913-14.	1912-13.
Visible and invisible supply beginning year.....	4,033	3,716	4,291
In sight year.....	15,432	14,570	14,140
Visible and invisible supply at close year.....	19,465	18,586	18,431
Burnt.....	14,136	14,553	14,715
Total world's consumption, American cotton.....	14,131	14,541	14,715

*This year's total subject to a possible reduction of about 25,000 (see remarks under head of "World's Consumption of American Cotton.")

Consumption American Cotton.

	This year.	Last year.
United States, North.....	2,571	2,571
United States, South.....	3,163	3,063
Foreign.....	8,397	8,907
Total American for year.....	14,131	14,541

*See note above.

Net Receipts of Cotton at United States Ports.

(As per form in use by the Cotton Exchanges.)

	1914-15.	1913-14.
Bales.....	1,810,454	1,891,434
New Orleans.....	4,001,710	3,567,381
Galveston.....	560,103	513,571
Port Arthur and Texas City.....	166,997	436,548
Mobile.....	87,236	166,447
Pensacola.....	1,762,418	1,843,267
Savannah.....	405,504	426,787
Charleston.....	279,097	350,012
Wilmington.....	645,766	600,836
Norfolk.....	83,114	104,772
Baltimore.....	30,022	6,708
New York.....	58,043	21,552
Boston.....	11,134	5,427
Philadelphia.....	24,770	30,485
Jacksonville and Fernandina.....	183,917	145,163
Newport News, etc.....	215,504	285,347
Brunswick.....	9,707	62,315
Laredo, Eagle Pass, etc.....	189,561	177,048
San Francisco, etc.....	277,269	78,271
Puget Sound, etc.....	52,906	29,729
Minor ports.....	10,805,052	10,792,710

Note.—Light-weight round bales have in all cases been included in receipts as half-bales.

*Total receipts at San Francisco, 199,032, including 9571 received from Galveston and counted in net at the latter.

*Total Puget Sound, etc., 280,468, including 3190 received from Galveston.

Exports.

	1914-15.	1913-14.
Britain.....	845,568	166,953
France.....	1,334,409	301,845
Germany.....	89,452	57,000
Italy.....	52,747	28,842
Japan.....	414,839	88,946
China.....	79,844	36,646
Wilmington.....	54,783	26,646
Norfolk.....	28,201	46,318
Baltimore.....	54,315	6,550
New York.....	45,590	35,334
Boston.....	105,979	12,798
Philadelphia.....	29,130	5,776
Jacksonville and Fernandina.....	178,607	12,798
Newport News.....	194,020	194,020
Brunswick.....	124,948	124,948
Laredo, Eagle Pass, etc.....	132,415	132,415
San Francisco, etc.....	42,672	548,196
El Paso, etc.....	3,805,824	677,014
Total.....	3,468,669	1,086,822
Last year.....	3,600,048	1,014,796
Year before.....	3,975,415	8,590,259

*Included under Continent are exports to Mexico, Japan, China and East India, which are, to Mexico this year, 16,340 from New Orleans, 4259 from Galveston, 20,158 from Texas City, — from New York, 618 from Laredo, El Paso, Eagle Pass, etc., a total of 41,415, against 30,751 last year and 22,282 year before last; to Japan and China, 489,843 from San Francisco, Portland and other ports, against 347,405 last year and 383,631 the year before; and to East India, none from Savannah and New York, against none last year and 335 the year before.

Cotton Consumption in the South.

Year ending July 31, 1915.

The South has again had a "banner year" in cotton consumption, the total, including linters, exceeding last season (which up to that time was the largest) by 100,000 bales.

Last year it was stated in this report that the increase then shown, though exceeding all previous records, did not represent the full consuming capacity of the Southern mills, as for a good part of the year upwards of 900,000 spindles in active mills were not in use, and during the month of August there was a total stoppage of mills embracing 532,431 spindles.

This year, a glance at the returns from the mills shows upon almost every line from every Southern State the almost stereotyped expression "full time."

Naturally for the reasons stated, August was, comparatively speaking, not a large month, but after that the monthly totals commenced to climb until the maximum monthly (in June) exceeded 300,000 bales.

The balance compared with the North is still more in favor of Southern spindles. In the North, the bales consumed (American only) were 2,018,000; in the South, 3,163,000, an excess in the South of 545,000.

The record shows that in the mills in operation there has been an increase of 48,546 spindles and there are 212,618 spindles in course of erection and being added to old mills.

The total number of bales consumed for the year ended July 31 is 3,163,388, against 3,063,286 last year and 2,955,244 the year before, an increase over last year of 100,102 and over the year before of 208,144.

Southern Cotton Spindles.

Years.	Number.
1880.....	255,359
1881.....	338,860
1882.....	561,360
1883.....	1,819,291
1884.....	3,177,310
1885.....	6,267,163
1886.....	6,531,894
1887.....	7,512,982
1888.....	8,248,275
1889.....	8,615,369
1890.....	9,208,949
1891.....	10,538,095
1892.....	10,661,308
1893.....	11,255,787
1894.....	11,583,359
1895.....	11,897,414
1896.....	12,318,356
1897.....	12,819,333
1898.....	13,199,426
1899.....	13,346,480

Roster of Mills.

Total number last year.....	841
Crossed out and merged into other concerns.....	4
New and uncompleted added to list.....	14
Total number cotton mills in the South.....	851

The record of spindles in the South shows:

	This year.	Last year.
Total in operation.....	12,883,006	12,834,462
Idle.....	250,854	184,804
New, not completed.....	212,618	180,160
Grand total.....	13,346,480	13,199,426

showing an increase of spindles, active, idle and not complete, over last year of 147,054 and a net gain of spindles at work of 48,546.

As indicated by the tables annexed, the total consumption in all the mills, old and new, for the year was 3,163,388 bales, against 3,063,286 last year and 2,955,244 for the season of 1912-13, an increase over last year of 100,102 and an increase over the year before of 208,144.

The average consumption per spindle in the mills in operation has been 5 26-100 pounds more than last year, and 2 69-100 more than the year before.

The Course of Consumption in South.

The course of consumption in South since 1880-90 is shown at a glance as follows:

	Consumption.	Increase.	Decrease.
1880-90.....	546,894	.....	.....
1890-91.....	604,661	57,767	.....
1891-92.....	686,080	81,419	.....
1892-93.....	743,845	57,765	.....
1893-94.....	718,515	.....	25,333
1894-95.....	862,838	144,323	.....
1895-96.....	904,701	41,863	.....
1896-97.....	1,042,671	137,970	.....
1897-98.....	1,221,841	179,170	.....
1898-99.....	1,399,399	167,558	.....
1899-1900.....	1,597,112	197,713	.....
1900-01.....	1,620,931	23,819	.....
1901-02.....	1,937,971	317,040	.....
1902-03.....	2,000,729	62,758	.....
1903-04.....	1,919,252	.....	81,477
1904-05.....	2,111,612	192,360	.....
1905-06.....	2,373,557	261,945	.....
1906-07.....	2,425,228	52,671	.....
1907-08.....	2,216,574	.....	179,654
1908-09.....	2,507,440	290,866	.....
1909-10.....	2,397,289	.....	110,151
1910-11.....	2,351,690	.....	45,529
1911-12.....	2,675,433	324,773	.....
1912-13.....	2,955,244	279,811	.....
1913-14.....	3,063,286	108,042	.....
1914-15.....	3,163,388	100,102	.....
Net increase since 1890 of.....	2,616,494 bales.	.....	.....

Southern Cotton Mills in 1914-1915.

MILLS.

	Total.	In operation.	New, not completed.
		Old.	New.
Alabama.....	73	63	1
Arkansas.....	2	1	1
Georgia.....	157	146	9
Kentucky.....	7	6	1
Louisiana.....	5	5	.....
Mississippi.....	29	13	7
Missouri.....	3	2	1
N. Carolina.....	1342	330	10
S. Carolina.....	190	187	1
Tennessee.....	23	20	1
Texas.....	15	13	2
Oklahoma.....	1	1	.....
Virginia.....	13	11	1
Total.....	1851	803	36
Last year.....	841	810	22
Year before.....	841	803	30

*Including mills commenced this year and those under this head last year not yet completed.
†Including 1 mill for foreign cotton in operation.

LOOMS.

	Active.	Idle.	Not Complete.	Total.
Alabama.....	19,049	.....	509	19,558
Arkansas.....	178	100	.....	278
Georgia.....	42,077	534	576	43,187
Kentucky.....	1,350	.....	.....	1,350
Louisiana.....	1,362	.....	.....	1,362
Mississippi.....	2,957	1,891	.....	4,848
Missouri.....	739	.....	.....	739
North Carolina.....	64,653	1,983	1,628	67,674
South Carolina.....	112,531	272	414	113,217
Tennessee.....	5,138	.....	.....	5,138
Texas.....	2,998	150	136	3,284
Oklahoma.....	13,829	225	109	14,154
Virginia.....	.....	.....	.....	.....
Total.....	266,241	5,165	3,651	275,057
Last year.....	263,556	4,250	1,966	269,772
Year before.....	256,756	4,894	8,373	270,023

SPINDLES.

	Total.	In operation.	New, not completed.
		Old.	New.
Alabama.....	1,106,232	1,050,276	5,000
Arkansas.....	14,009	7,000	.....
Georgia.....	2,246,050	2,120,076	45,100
Kentucky.....	55,569	54,728	841
Louisiana.....	65,963	63,983	1,980
Mississippi.....	183,318	122,400	60,918
Missouri.....	32,256	31,896	360
North Carolina.....	3,948,196	3,773,763	88,472
South Carolina.....	4,700,286	4,606,658	1,760
Tennessee.....	323,576	312,972	6,600
Texas.....	125,600	113,160	12,500
Oklahoma.....	5,712	5,712	.....
Virginia.....	510,652	495,652	15,000
Total.....	13,346,480	12,883,006	463,474
Last year.....	13,199,426	12,834,462	364,964
Year before.....	12,819,333	12,388,651	430,682

*Includes spindles being added to old mills as well as those in new concerns.
†Including spindles added to old mills, less spindles thrown out during the year, and new not complete mills of last year which started operations this season.

*Exclusive of 46,421 spindles using foreign cotton, say — in Alabama, 14,757 in Georgia, 30,224 in North Carolina, 1440 in South Carolina.

Southern Consumption of American Cotton, Year Ending July 31.

(Actual figures reported by the mills.)

	*No. mills.	†Looms.	‡Spindles.	§Bales.
Ala.....	69	19,049	1,055,276	309,784
Ark.....	2	178	7,000	2,570
Ga.....	146	42,077	2,120,076	677,509
Ky.....	7	1,350	55,569	33,325
La.....	5	1,362	65,963	30,081
Miss.....	13	2,957	122,400	34,591
Mo.....	2	739	31,896	23,380
N. C.....	332	64,653	3,794,363	918,192
S. C.....	188	112,531	4,608,418	825,838
Tenn.....	21	5,138	319,572	85,753
Tex.....	15	2,998	113,160	61,290
Okla.....	1	5,712	5,712	10,146
Va.....	11	13,829	495,652	124,692
Totals.....	809	266,241	12,883,006	3,163,388
Less consumed and taken from Southern seaports and included in port receipts.....	.....	.....	.....	148,912
Net consumption to be added to crop.....	.....	.....	.....	3,014,476

*Mills in operation only. For total in South see other table.
†Employed in mills in operation. For total looms and spindles in South see other table.

‡Exclusive of one mill in operation using only foreign cotton in North Carolina.

§Spindles working American cotton only; for statement foreign see elsewhere.

Spinners' Takings—United States.

AMERICAN COTTON.

	1914-1915.	1913-1914.
Total crop United States.....	15,108,011	14,882,493
Stocks at ports beginning of year.....	225,823	161,117
Total supply.....	15,333,834	15,043,610
Exported during year — (American).....	8,357,223	9,037,906
Sent to Canada.....	184,685	146,934
Total.....	8,541,908	9,184,840
Less American cotton returned from foreign ports:	.....	.....
To New York.....	2,077	.....
New Orleans.....	59	1,275
Boston.....	314	.....
Various.....	790	.....
Total.....	849	3,666
Burnt at ports.....	8,541,059	9,181,174
Stock at close of year.....	1,622	11,757
Total.....	744,557	9,267,238
Total takings for consumption, United States.....	6,046,596	5,624,856
Of which—	.....	.....
Consumed by spinners in Southern States—total.....	3,163,388	3,063,286
Taken by Northern spinners.....	2,883,306	2,561,570

\$300,000,000 New Bonds for the Seaboard Air Line

\$22,893,000 TO BE ISSUED IMMEDIATELY FOR FINANCIAL REQUIREMENTS—416 MILES ADDED TO SYSTEM BY TAKING IN THE CAROLINA, ATLANTIC AND WESTERN—SAVANNAH EXTENSION TO BE BUILT AT ONCE—BANKERS DEMONSTRATE CONFIDENCE IN THE SOUTH.

A comprehensive financial plan for the Seaboard Air Line, upon which S. Davies Warfield, chairman of the board, has been working for some time, has just been approved at a meeting of the directors in Baltimore, and its success evidences the confidence of prominent financiers in the South, for the new issue of bonds (Series A under this large general mortgage) has been sold to a banking syndicate headed by the Guaranty Trust Co., the National City Bank, the Chase National Bank and the Bankers' Trust Co., all of New York; the Continental Trust Co. of Baltimore, and other financial institutions in New York, Baltimore, Chicago, Boston, Philadelphia, Pittsburgh, St. Louis, Cleveland, Cincinnati, San Francisco, Milwaukee, Detroit, Atlanta, Savannah, Louisville, Columbus (Ohio), Seattle, Denver, New Orleans, Buffalo, Syracuse, Rochester, Wilmington, Newark and Albany.

The plan, which will be far-reaching in its results, includes the sale and exchange by Mr. Warfield of \$22,893,000 of 6 per cent. bonds, the addition of a large new mileage to the Seaboard system and the simplification of its financial structure, which will aid in its full development. A new mortgage authorizing a total issue of \$300,000,000 of bonds in series as may be required from time to time will be made, and under it \$25,643,000 of Series A bonds will now be issued, of which \$2,750,000 will remain in the treasury.

Concerning the plan and its adoption by the board, Chairman Warfield says:

"The financial requirements of the Seaboard Air Line for the present and future have been provided for:

"First—By creating a physical railroad structure in the enlarged Seaboard system far-reaching in its benefits to the South and to the railroad, and as a result greater economies in operations;

"Second—A mortgage thereon securing bonds issuable in series which may be of varying maturities and interest and redemption rates, providing a security meeting investors' requirements and ensuring to the railroad the best results under changing financial conditions; and

"Third—By the sale of bonds under the new mortgage for the purposes hereinafter mentioned, of great importance to the welfare of the railroad and of the holders of its securities.

"The Seaboard Air Line Railway will be consolidated with the Carolina Atlantic & Western Railway under the corporate name of the Seaboard Air Line Railway Co. The Carolina, Atlantic & Western Railway is a recent consolidation of the North & South Carolina, Charleston Northern and South Carolina Western railroads, operating a total of 416 miles. The Carolina, Atlantic & Western Railway recently acquired the Georgetown & Western Railroad, operating from Lanes to Georgetown, S. C., and from Andrews to the Pee Dee River, S. C., a distance of 70 miles. The Charleston Northern Railway is the line recently completed connecting the North & South Carolina Railroad with the city of Charleston, giving the Seaboard Air Line entrance into Charleston and now becoming a part of the main line of the consolidated system. The new terminals at Charleston are admirable both as to location and facilities.

"The line will be extended from Charleston to Savannah by the immediate construction of 85 miles of railroad with maximum grade of only three-tenths of 1 per cent. This new line will also become part of the main line of the consolidated system.

"This will give the Seaboard Air Line Railway Co.—the new company growing out of the consolidation of the above-mentioned properties—a low-grade line from Hamlet, N. C., to Savannah, Ga. By this new line the Seaboard will reach Georgetown, S. C.; Charleston, S. C., and Savannah, Ga.; will tap a rich and fertile territory, highly productive in cotton and tobacco; will admit of the Seaboard's running time to the South being shortened; will create a line with maximum grade of

only one-half of 1 per cent. as compared with 1½ per cent. (the maximum grade of the present line to Savannah), and which will permit the increase of the full trainload 127½ per cent. In effect, this will give the Seaboard through South Carolina, from Hamlet, N. C., to Savannah, Ga., two lines (the other line running via Columbia), each one self-supporting in its own territory, and thus will be obviated the necessity of double-tracking the Hamlet-Columbia line, where traffic is becoming congested. The territory to be opened up between Charleston and Savannah is generally well adapted to the growing of vegetables, corn, rice and Sea Island cotton, and will put the Seaboard immediately into Charleston's heaviest vegetable-producing section.

"The Seaboard Air Line Railway Co. (the new company) will have its first and consolidated mortgage securing an authorized issue of \$300,000,000 variable interest rate and maturity bonds. This mortgage will be immediately a first lien on the 416 miles of main line track between Hamlet and Savannah via Charleston, Lanes and Georgetown, S. C., and on the lines running from McBee, S. C., located on the Hamlet-Columbia line, to Florence, Poston, Sumter and Timmonsville, S. C. There will be pledged as collateral under the new mortgage a majority (\$22,361,000) of the outstanding 4 per cent. refunding bonds of the Seaboard Air Line Railway.

"There will be presently issued under the new first and consolidated mortgage \$22,893,000 of 6 per cent. 30-year gold bonds; part are to be used in exchange for underlying bonds of constituent properties. The balance has been sold, the proceeds to be used for the construction of the new line from Charleston to Savannah; for the retirement of equipment trust obligations falling due during the year ending June 30, 1916; for the retirement of the \$6,000,000 three-year notes due March 1, 1916; for the acquisition of certain new property; for improvements and betterments, etc.

"It was believed to be to the best interests of the property to make immediate arrangements for the near future as well as present financial requirements. In the financing of the nations at war interest rates have already materially increased, necessitating the procuring of large amounts of money for American enterprises on an increasing interest basis.

"Subject to the carrying out of agreements for the exchange of bonds of the underlying railway properties to be consolidated with the Seaboard Air Line Railway, arrangements have been made for the sale of the bonds of this issue (Series A) as above stated."

In the Baltimore financial district the success of such a large financial operation in the present times was very favorably commented upon. When Mr. Warfield acquired three years ago for himself and associates the large block of Seaboard preferred and common stock, then owned by the Cumberland Corporation, his plans were laid, it is said, to bring about the result now attained after much laborious and difficult work. The entire executive management was then located in the South, and among the new directors who at that time entered the board were a number of prominent Southern men such as Robert F. Maddox, Atlanta, Ga.; Mills B. Lane, Savannah, Ga.; A. H. Woodward, Birmingham, Ala., and J. P. Taliaferro, Jacksonville, Fla. Other Southern directors are George W. Watts, Durham, N. C.; Fergus Reid, Norfolk, Va.; W. J. Harahan and Charles R. Capps, Norfolk, Va. (president and vice-president, respectively), and J. William Middendorf and Townsend Scott, Baltimore.

The program now adopted by the directors, it is believed, will be of great benefit to the South.

The directors have left the details in connection with the general plan to the finance committee, of which Mr. Warfield is also chairman. The Continental Trust Co., Baltimore, was appointed as agent of the railway to carry out the details of the consolidation, etc.

The German Nitrogen and Potash Industries.

The weekly bulletin of the American Association of Commerce and Trade of Berlin, discussing the nitrogen and potash industries of Germany, says:

"On March 8, 1915, the German Federal Council proposed to the German Reichstag the law establishing a Government monopoly of nitrogen.

"Nitrogen is now produced artificially in a number of large plants in Germany, which product is bound to become a most important branch of German industries.

"The opinions as to this monopoly are divided, and to illustrate reasons against it the German Chamber of Commerce (Deutscher Handelstag) announces the following:

"A nitrogen monopoly will not only lead to a restriction in the trade of nitrogen products, but will also lead to restriction and regulation of the production, in case its aim shall be reached, to put the now established plants on a paying basis.

"To tie up the production by above methods means paralyzing the German nitrogen industry, which is just now in a most prosperous and promising state of development. Moreover, not only is the establishing of further plants, which expect to operate on known methods, prevented, but also the attraction and stimulation for the invention of new and better manufacturing methods and applications will be shut out, because the monopoly will prevent the successful exploitation of the results of experiments.

"The results achieved so far by the German nitrogen industry justify the assumption that its free and unimpeded development will lead shortly to a time when Germany's entire demand for nitrogen-compounds will be met in Germany, and what is more, to the entire exclusion of foreign nitrogen products.

"The above-mentioned development of the industry in question only offers the guarantee that the German chemical industry will be able to acquire the necessary nitrogen compounds at no higher price than on the world's market, while, on the contrary, the underlying purpose of the proposed monopoly will lead to a much higher price in Germany than in any other country.

"In view of the great importance of the price of nitrogen compounds for the price stipulation of the final products of the chemical industries, such as dyestuffs, explosives, etc., a weighty price increase of nitrogen compounds in Germany, as compared with foreign countries, would seriously endanger the ability to compete with foreign competition. And furthermore, the German dye industry would be weakened in the coming struggle to regain its supremacy in the world's market.

"The interests of Germany's food supply demand such a development of the nitrogen industry which will ensure a more plentiful and better supply of nitrogen for agricultural purposes, and this only by low prices and low cost of production of new and valuable nitrogen compounds.

"It does not seem to be just, in view of the above statements, to impose upon the interested circles of the trade and ocean transportation, difficulties which are bound to result from the introduction of a nitrogen monopoly.

"In just cognizance of these reasons the committee of the German Chambers of Commerce sees fit not to recommend to the German Federal Council the introduction of the proposed monopoly."

"The German Potash Syndicate reports a decrease in the sale of potash amounting to \$10,000,000, covering the period of the first five months of this year, as compared with the same period in 1914.

"Since the beginning of the war the decrease in the sale of potash aggregates approximately \$25,000,000, corresponding to a volume of 550,000 tons of pure potash.

"The reasons for this considerable decrease have been frequently explained. The principal reasons are the embargo on the export of potash and the well-nigh cessation of foreign business.

"As a result of the lack of transportation facilities, German farmers purchased 121,000 tons less than in the corresponding period before the war. Arrangements have been made to secure better facilities for the coming fall."

Great Demand for Ships—Remarkable Activity in Ship Building and Selling

"Never have I seen such a rush in shipping circles of the country for ships. If our plant were equipped to take a larger business than it now has, I could close immediately additional contracts for \$4,000,000 to \$5,000,000 worth of work," was the statement made to the MANUFACTURERS RECORD by Mr. H. A. Evans, vice-president and general manager of the Baltimore Dry Dock & Shipbuilding Co.

Mr. Evans' company has just closed a contract with a Norwegian firm for two oil tank steamships to be 293 feet long and to cost approximately \$500,000. So great is the demand for ships that if this yard was ready to take orders for larger boats a contract could have been made for much bigger ships, and with a view to helping to meet this situation the company will begin immediately spending \$100,000 for providing additional slips and other facilities in order to handle some of this rapidly-increasing business. The demand for shipbuilding, Mr. Evans reports, comes not only from foreigners, but from Americans, and while in New York a few days ago he was offered a contract by an American shipowner for three steamships from 360 to 450 feet in length.

Indicating the remarkable activity in shipping circles and the demand for ship room, Mr. Evans stated that six weeks ago a Norwegian arrived in New York. One morning he bought five American schooners for \$137,000. In the afternoon he chartered all five of them to carry lumber, probably from Gulf ports, to the United Kingdom for a total freight of \$167,000 for one outward cargo. In other words, the freight for one voyage from this country to Great Britain exceeded by \$30,000 the entire purchase price of these schooners. The freight is to be paid in this country when the ships are loaded. A few days after the charters were made this Norwegian operator sold these five vessels to be delivered on arrival in the United Kingdom, and he has now gone abroad to close up the final details of the deal which will net him a profit of over \$100,000.

These facts indicate something of the activity in the shipbuilding circles of the country, fulfilling the predictions of the MANUFACTURERS RECORD made many months ago that every shipyard in the United States would soon be taxed to its utmost capacity to meet the demand for ships.

King Iron Returns to His Throne

A STRIKING CHANGE IN THE BIRMINGHAM BUSINESS SITUATION.

[Special Correspondence Manufacturers Record.]

Birmingham, Ala., August 9.

Improvement in the Southern metal situation has assumed a rapidity of pace that renders it difficult to refrain from the use of the word "boom." When on August 1 the Tennessee company withdrew from the iron market for the rest of the year and announced \$12.50 for 1916 delivery, sales at that figure were not expected. However, during the first week of the month sales aggregating 10,000 tons and over were made at that price upon firm offers from consumers. When the \$12.50 basis for 1916 delivery was announced by this interest, some other makers were selling spot iron as low as \$10, others had advanced to a maximum of \$10.50. On Monday of last week the Sloss-Sheffield declined to book orders of large tonnage for 1915 delivery at \$10.50, and advanced to \$11. The Woodward Iron Co. made a similar advance, and even at the advance accommodated only regular customers on account of the well sold-up condition of order books. Before the week was out the Republic company advanced to \$11 and sold freely on Saturday at that price. Consumers were glad to get the metal at the advance. Agents of one concern were instructed to limit the amount sold at \$11 until further instructions. This means that spot iron, which speculators bought a few weeks ago at as low as \$9.25, is now selling freely at a minimum of \$11, an advance of \$1.75 per ton. For the fourth quarter \$11.25 must be paid. Further advances may be expected.

The water pipe concerns, following the advance in pig-iron, have marked up pipe 50 cents per ton and are operating on an 85 per cent. capacity with well-filled order books. Present quotations are \$21 and \$19, respectively, for 4 inches and 6 inches and upwards, with \$1 added for gas pipe.

Coke has also advanced. The vastly larger quantity of coke required for resuming blast furnaces has lessened the general supply. The entire beehive make is well taken care of at \$3.25 to \$3.50, f. o. b. ovens.

Even scrap dealers have participated in the uplift, advancing most grades 50 cents per ton and getting rid of accumulations.

Coal has begun to feel the stimulus, several furnace interests offering less for the open market on account of the increasing supply needed for coking purposes. Both output and prices will soon show gains.

The stove foundries, last of the plants to become active, are preparing for resumption. The Birmingham Stove & Range Co. is completing the first unit of its new plant in Birmingham and will be in operation by September 15. It is claimed that this is to be the largest stove works in the South. Bolling Jones of Atlanta is president, and B. H. Hartsfield, Birmingham, general manager.

Down at the bottom of the rising foundry iron market is the tremendous demand for steel products. That has caused a number of furnaces to change from foundry to basic, thus diminishing the foundry supply. St. Louis reports are to the effect that Chicago foundry is rapidly disappearing as a competitor of the Birmingham metal in the Middle West because many furnaces have changed to basic, and all the foundry as well as basic is called for in Chicago territory. In the Birmingham district the Tennessee company has seven of its nine stacks on basic and, with practically no stocks on hand, has left the field open to the regular foundry iron makers. Under such conditions it is not unlikely that maximum prices will be paid for Birmingham foundry iron, no matter what the increase in output.

Alabama iron manufacture continues to increase. On July 1 there were 17 active stacks; on August 1 there were 20. The July output was 165,000 tons, compared with 158,000 in June, 147,000 in May and 139,000 in April. The Tennessee company blew in a Bessemer stack during the week. The Woodward company will blow in Vanderbilt as soon as the by-product plant additions at Woodward are finished and coke is obtainable. At present the Woodwards have been forced to purchase coke from the Tennessee company to patch out. The district is headed to a maximum output equaling that of the banner month, May, 1913, when the production was 186,000 tons.

Thousands of men have returned to work. A scarcity of labor in the near future is not improbable.

For the first time in over a year bank clearings in Birmingham have shown an increase over the same period in 1914. This was the case every day during the past week. Larger payrolls will add to the percentage of the increase. The opening of the Jefferson County Bank, successor to the Jefferson County Savings Bank, which closed in January, was a pronounced success. On the first day over \$250,000 in deposits were taken in, while withdrawals were only \$50,000. The latter were principally by negroes and small white savings account depositors, who were in dire need of the money which they had been without for seven months.

Perhaps the most novel method of shipping coal yet devised is that by means of which the Alabama & New Orleans Transportation Co.'s self-propelling barges expect to carry the Edgewater mine coal of the Tennessee company to Mobile and New Orleans. The coal will be taken to the river, a distance of 10 miles, by the Ensley Southern Railroad. At the river a chute is to be cut into the railroad bridge and the coal dumped into the barge through this chute. Government permission to do so is being sought and doubtless will be obtained.

The Empire Coal Co. is building spur tracks to the Warrior so as to get into the river business.

The wholesale machinery trade, the last to feel the effects of better conditions, is at last among the normal. Dealers report this week that for the first time in a year business is up to that of the same period in 1914, with a good demand for practically every kind of goods. The change from steam to electricity in mine, mill and factory incident to the development of hydro-electric current on the Coosa River by the Alabama company has created a steady demand for electrical apparatus. The Yolande mines are among the collieries recently taking on electricity, and the Sloss-Sheffield brown ore mines at Russellville have also made the change.

Machine tools cannot be supplied in quantities desired because manufacturers are behind on orders.

Wage cuts have been restored in several quarters, the Woodward Iron Co. and the Kaul Lumber Co. being among the firms making this announcement. As few wage cuts were made, there is not much to do in this respect.

Merchants have scarcely begun to feel the new tide. It will require several more paydays before they do.

There is a general confidence in the ability of the Southern cotton grower to warehouse his cotton and hold for fair prices this year. The stampede created by croakers and speculators last year will not be duplicated. The Alabama Legislature is about to pass the South Carolina law relating to uniform warehouse receipts. Effort will be made to have the Alabama statute in line with that of the other States having such a law.

The belief in the return of prosperity is now shared by all.

R. F. JOHNSTON.

Shipbuilding Activity at Newport News.

[Special Dispatch to Manufacturers Record.]

Newport News, Va., August 10.

The Newport News Shipbuilding & Drydock Co. has closed a contract with the Standard Oil Co. for two bulk oil steamers. These are to be duplicates of the two twin-screw steamers, of 14,900 tons deadweight, dimensions 516x68x38 feet, recently mentioned in the MANUFACTURERS RECORD as under construction, the keels having been laid. This company also has a contract for another oil steamer for the Standard Oil Co., dimensions 460x60x36 feet, of 8400 tons (gross tonnage), making in all five big ships for that company. A contract has also been made to repair the fire damage on the Standard Oil steamer Standard at an approximate cost of about \$500,000.

It was recently stated in the MANUFACTURERS RECORD that the work under construction or contract by this plant aggregated between \$20,000,000 and \$25,000,000. To this vast sum is now added the contract for these two big oil steamers and \$500,000 repairs on another.

Heavy Imports of Manganese at Baltimore.

The arrival at the port of Baltimore on August 9 of two cargoes of manganese ore, amounting to 14,200 tons, re-emphasizes the point made in the MANUFACTURERS RECORD of June 3 of the great increase in manganese shipments to this country from Brazil since the beginning of the European war.

The employment of larger steamships in place of almost exclusively schooners in this expanding industry is noticeable. The largest cargo of manganese ore ever brought into Baltimore harbor, it is claimed, is that of 8200 tons which arrived August 9 in the American ship Californian. Norwegian and English craft also are being largely used in the movement of manganese ore from the Brazilian fields to the United States, coming almost entirely to Baltimore, from whence this ore is shipped overland to the Pittsburgh region and other steel centers.

Gustavus & Co., steamship agents, Baltimore, report about 10,000 tons of ore on the way or booked for shipment before September 1. This company reckons the shipment of manganese ore to Baltimore from Rio Janeiro, Brazil, to be now standing at the rate of about 20,000 tons a month. This is treble the amount shipped prior to the European war, when the import of Brazilian ore amounted to very little over 6000 tons a month, and a gain of about 33 1/3 per cent. over the shipments of two months ago, when the then heavy increase and consequent possibilities were mentioned in these columns.

To Treat Low Grade Ores of the South

SMELTER AT WEST NORFOLK, VA., OPENS NEW MARKET FOR PRODUCTS OF SOUTHERN MINES—BY-PRODUCT PLANT AN INTERESTING FEATURE.

The Norfolk Smelting Co., Inc., a subsidiary concern of Beer-Sondheimer & Co., New York, is carrying through a smelting project at West Norfolk, Va., that is of broad interest owing to its unicity, it being the only plant of its kind in the South Atlantic States, and more especially owing to the new field of outlet it constitutes for Southern copper and gold ores.

Copper, silver and gold ores of low percentage, from the Appalachian and other Southern sections, have been

is being rehabilitated. Construction is along permanent lines of steel, concrete and brick.

The gold and silver recovered with the copper are, for the present, not separated at the West Norfolk plant, but at refineries elsewhere. Extending the plant to include this branch is presumably the plan of the company.

Ore for smelting at the plant is obtained principally from Cuba, Venezuela, the west coast of South America,

is now being made to use it in the manufacture of cement brick. It is also valuable for concrete work for foundations.

The Virginia Smelting Co. is completing and putting into operation in connection with the smelter of the West Norfolk Smelting Co., a by-product S.O.₂ plant, probably the first of its kind in the United States. Pyrites cinder, or burnt ore, from sulphuric acid plants in various parts of the country, principally Philadelphia and Pittsburgh, is carried by the plant of the Virginia Smelting Co. through the Ramen-Beskow system of washing and leaching, to produce electrolytic copper.

Need of a Big Navy-Yard at Charleston.

Charleston, S. C., August 5.

Editor *Manufacturers Record*:

We wish to thank you for the copy of your valuable paper containing the article about our city. Charleston has undoubtedly enjoyed more prosperity during the last 12 months, during period of the war, than any city of its size in the South, and depression has been felt to much less degree due to the fact that our city administration has been doing a large amount of municipal improvements, and railroads, namely, the Clinchfield and Southern, spending large amounts on coal piers and private concerns erecting factories and improving the waterfront generally.

We have read your article, "Vital Southern and National Opportunities to be Utilized." In paragraph 3 you refer to the needs of adequate navy-yards for the building of ships and especially docking facilities for the repairing of warships and for coaling purposes. There is no question that, from the standpoint of preparedness for war, this Government should have a navy-yard below Hatteras to protect the South Atlantic seaboard and the Panama Canal. The only navy-yard south of Hatteras is the one located here—those at Key West and New Orleans are considered as Gulf yards—so that this is the only point to which ships could come for repairs and other purposes.

Charleston is the nearest Atlantic port to Panama, and in case of war there is no question that the canal will be in great danger. If the Government through the Navy Department really is serious about putting our country on a basis of preparedness for war, it cannot overlook the vital necessity of improving the Charleston yard, and, in our judgment, it should spend from \$3,000,000 to \$5,000,000 on proper dry docks, piers and cranes for handling work on the ships of the first and second line of defense. Our coaling facilities are rapidly assuming proportions equal to Norfolk, and this is the logical port for improvement for naval defense. In fact, a prominent naval official said that, as above outlined, if improvements mentioned were made in our yard it would be equal to a new battleship.

We take pleasure in referring you to the reports of various commandants who have been at this yard in the past five years in reference to this matter, especially Admiral Edwards. We also wish to state that city officials as well as commercial bodies have been working with this end in view for many months.

A. W. LITSCHIG, JR., Secretary,

Phoenix Furniture Co.

Heavy Shipments of Texas Sulphur.

Freeport, Tex., August 7—[Special].—The steamship Kennebec left port Monday with the heaviest cargo of sulphur it has yet carried from here, the vessel being laden with 3014 tons. The steamship Honduras is due in port on the 12th with a cargo of general merchandise from New York, and will carry out a full return cargo of sulphur. It is planned by the Seaboard & Gulf Steamship Co. to hereafter make sailings from both Baltimore and New York to Freeport.

If present plans materialize, Corpus Christi, Victoria, Rockport, Seadrift, Palacios and other lower coast points may hereafter avail of all water freight route from New York and Baltimore through the port of Freeport and through the interoceanic canal. The Interoceanic Transportation Co. of Corpus Christi is now negotiating with steamship interests here with a view to creating such a service.



PLANT OF THE NORFOLK SMELTING CO., INC., AT WEST NORFOLK, VA.

little developed because of the necessity of long freight routes to the nearest smelters, hence a loss of profit in mining.

There has been operated intermittently at West Norfolk for the last 16 years a small copper smelter. However, owing to the uncertainty of operation and the narrow limits of its facilities, this plant was unable to measure up to the opportunity of building in itself a great industry and simultaneously giving life to the ore fields of the South by affording a reliable market for an output from them.

A year ago this West Norfolk Smelter was taken over by the concern named above. Since then the capacity has been doubled and the production of copper carried through another step in the process of obtaining the pure metal—from the production of matte, to black, or

Missouri, the Central West and the Atlantic seaboard as far north as Canada. It is hoped by the company to obtain ore in large and increasing proportion from the Southern and Southeastern States. The fact that the company has chosen a location on Hampton Roads is evidence of its confidence in the development of the Southern low-grade copper ores on a much broader scale than heretofore has been. It is thought that these improvements enable the company to quote smelting tariffs low enough to make available some ores that previously could not be mined at a profit.

The slag resultant from this operation is hauled in its molten state in two-ton cars over rails laid especially for the purpose. The rails have been laid and the outer line of the pier constructed 2350 feet long by 475 feet front. This space will either be pumped full of



DUMPING SLAG TO FORM A PIER 2350 FEET LONG.

converter copper. The converter copper turned out at the West Norfolk smelter since last April is the first ever produced in Virginia.

In addition to a sintering plant of 100 tons a day capacity, another of equal capacity is under construction and is expected to be ready for operation in 90 days. The unit now building is so arranged that its capacity can be easily doubled. The converting equipment is another important addition to the plant. The rated output is 700 to 750 tons of converter copper a month. As rapidly as is practicable the old portion of the plant

earth or filled with slag, forming about 25 acres of land for use as building sites and dockage.

The Virginia Smelting Co. has contracted with the West Norfolk Land & Improvement Co. to use the output of slag for the improvement of its entire 1700 feet of waterfront on the main 35-foot channel leading to Norfolk, Portsmouth and the Navy-yard. This will reclaim between 50 and 75 acres of land, now under water, with ample dock facilities and give desirable factory sites. While the slag is useful for the purposes of building piers and dikes, an experiment

American Industries Handicapped by European Methods

PROBLEMS THAT WILL BECOME GRAVELY ACUTE WHEN FOREIGN NATIONS
START TO REGAIN THEIR TRADE.

By J. O. ARMOUR, President of Armour & Co., Chicago.

From early packing days foreign trade has been an important item in the annual turnover. In its development much opposition by agrarian interests had to be overcome, and in many countries our business has been retarded through tariff manipulation, impossible local inspection regulations and other devious methods. Notwithstanding this opposition, the export of meat and its by-products aggregates a respectable percentage of the sum total of United States exports. In the development of our portion of this commerce and in carrying on our various industries we have come to know the European "trade convention," the "syndicate," the "cartel," the "get together" of Continental Europe, and especially of Germany, where this method of buying and selling has received its greatest development. We buy from them; we sell to them; we compete with them. Many of these syndicates are as efficient as buzz saws, and as dangerous to fool with. Sales pooling is encouraged by the German Government. In some industries the States participate. The result is greater efficiency at less cost, the public as well as the members sharing the economy. Some of these conventions "go wrong," as for instance the one controlling the buying and selling of some 300 glue factories scattered through Germany and Austria; others "go right," as for example the steel convention, the sulphate of ammonia selling company, and last, but not least, the potash syndicate. Germany has a practical monopoly of potash, and potash is an important constituent of peace as well as war. It makes your soft soap; it strikes your matches; it helps cure your meat; it blasts your rock, and it assists materially in growing your crops. It is found in Germany in practically inexhaustible quantities in veins running through rock salt and some 2000 or 3000 feet down. It can easily be overproduced. For some years after it was discovered it was overproduced and no profit accrued in its manufacture. The Prussian Government owned several mines; other German States were interested. There were a number of privately-owned mines. Operation without profit didn't appeal to the Prussian Government any more than to the private owners, so they got together and organized a five-year selling syndicate, each producer trading out his percentage of the total business, domestic and foreign. The syndicate formed an export branch, a domestic distribution and an educational advertising propaganda, and went to work. It was headed by a Government official. Prices were put on a profitable though not excessively high basis, and the industry flourished. Each five years it was renewed, new producers coming in from time to time. Some of these newcomers, to strengthen themselves, would occasionally sell outside the syndicate, and then go on. American users would often buy of these independents. Our fertilizer works did this in rather a large way in 1905, taking bulk mine-run salts. We also needed concentrated bagged salts. To punish us for buying outside, the syndicate attempted to make us pay 5 per cent. more for our bagged potash than other American buyers. We refused to be punished, and after a time induced a new mine to sell us bagged goods on a long contract at below syndicate values, the mine later joining the syndicate. In June, 1909, a new syndicate was to be formed. The mines could not get together, and for two hours large sales were made by seven mines out of the 52 to American buyers for from two to seven years at a 35 per cent. reduction from current prices. Within two hours the Prussian Minister of Commerce stopped further selling and took immediate steps to cancel, if possible, contracts already made. A law was introduced in the Reichstag and passed, declaring potash to be a monopoly and each producer entitled to a fixed percentage on the total; if he sold more, the over-sale was taxed heavily. Domestic and foreign prices were fixed. The tax caused the cancellation of the

American contracts, as the mines had largely oversold their allotments. I mention these happenings to show how the Government protects its industries and assists in securing profitable business for Germany.

The syndicate now represents some 160 mines, owned probably by 80 companies. This one selling organization takes the place of say 80 under competitive conditions, and saves the industry unnecessary selling expense. It has one export department, with representatives in every country. Its educational fund totals \$1,500,000 a year, and a large part is expended in foreign trade propaganda. Its trade increases each year. Prices, considering the number of mines participating, have been fairly reasonable. Mining has been carried on under strict Government supervision, with no waste. Their prices are profitable enough to cover good mining methods, unlike much of our coal mining, where I understand low prices have compelled wasteful mining methods and inadequate protection to workers.

The attitude of the various German States toward their export trade has been one of helpfulness. They encourage exports by publishing through tariffs from manufacturing centers to delivery points all over the world, so prompt c. i. f. prices can be quoted. They give low rail rates on goods to be exported, both in car and less than car lots; they equalize raw material rate costs from port to plant, and finished goods rates from plant to port, so that industries may be maintained where originally located. Their world branch banks keep their home head banks informed of local trade conditions and competitors' invoice prices, and this information goes to the interested syndicate or manufacturer. By all these methods and others they decrease their delivered goods cost to the benefit of the German people and along the line of economic conservation. To compete successfully against such backing is difficult at best. Whether our people could in part adopt these methods I cannot say. It would seem that serious study might profitably be given the question of syndicate organization for the sale in foreign countries of many of our products, such as coal, lumber and phosphate rock, where one organization in each line could attend to selling, chartering, insurance, credits, advertising, and so on, avoiding duplication in expense and giving the American manufacturer lower delivered costs and a better chance to compete successfully for foreign trade.

The method might not work to advantage on advertised trade-mark goods or where large selling organizations have already developed an official distribution for their output. Each industry would solve its own problems.

When the war ends all European countries will be organized on a syndicate basis. Their industries will be more centrally controlled. They must get on their feet as soon as possible. Foreign trade will be needed more than ever, and it must be secured at the least possible expense. Our present happy-go-lucky individualistic methods of seeking outside commerce will handicap us as against European efficiency, sharpened, as it will be, by necessity. We may have to modify our present notions somewhat if we are to secure and hold our share. A "condition, and not a theory," confronts us.

Acme Hosiery Mills.

About \$35,000 will be invested for doubling the Acme Hosiery Mills, Ashboro, N. C., mentioned last week. Contracts have been awarded for building and machinery, except some noiseless chain drive electric motors, which will be wanted. The new building will be of brick, two stories high, 100x60 feet, costing from \$8000 to \$10,000, and the machinery will include 100 knitters, etc., costing about \$25,000. Present daily capacity of 1000 dozen pairs of hose will be increased to 2000.

Millions Gained by Increase in Oil Prices.

Pemeta, Okla., August 7.—[Special].—The increase in the price of crude oil of 15 cents a barrel during the past week, including all Oklahoma fields excepting the Healdton, is a big proposition to the holders of stored oil, and it proves that those prophets were correct who declared that the oil being put in storage while the price was low would mean the biggest profits yet made in this wonderful oil field.

The last figures obtainable on the number of 55,000-barrel steel tanks in Oklahoma were those of just a month ago, nearly 1300 tanks of that size. Their total cost, at an average of \$13,500 each, amounted to approximately \$16,000,000. The increase of but 15 cents a barrel in the price of crude—all within one week—means an increased value on the contents of these 1300 tanks of \$10,725,000, figuring a total of 71,500,000 barrels. Another five cents increase in the price of oil would mean an additional \$5,375,000 to the owners of the 55,000-barrel tanks. The total 20 cents increase would practically pay for all the 1300 tanks' construction. One week ago the amount of oil stored in 55,000-barrel tanks alone was worth at 40 cents, the market price, a total of \$28,600,000; today it is worth \$39,325,000.

Within this oil field district alone there are 700 of the big steel tanks, or a total of 38,500,000 barrels of oil. A 15-cent increase in the market price means an additional value to the owners of this storage of \$5,775,000.

The five biggest holders of stored oil in Oklahoma are the Prairie Oil & Gas Co., with 188 of the 55,000-barrel steel tanks; the Texas company, with 176; the Gulf company, with 129; the Carter, with 122, and the McMan, with 120. The increase of 15 cents a barrel in the price of crude means, therefore, an additional value of the Prairie's stored oil of \$1,541,000; of the Texas, \$1,552,000; of the Gulf, \$1,063,000; of the Carter, \$1,006,000, and of the McMan, \$990,000.

Raising Indigo in South Carolina in Olden Days.

A reader of this paper has kindly sent us a copy of the life of Eliza Pinckney of South Carolina, in which reference is made to the very extensive production of indigo in South Carolina as early as 1742.

Mrs. Pinckney was the daughter of an English army officer, Lieut.-Col. George Lucas, who was the Royal Governor of the West Indian Island of Antigua. He took his family to the Province of South Carolina in 1737, on account of his wife's health. He had plantations near the Ashley River, 17 miles from what was then known as Charles Town. Having to return to Antigua, Governor Lucas left the plantation in charge of his daughter, Eliza, then 16 years of age, and to her South Carolina was indebted for the indigo industry. In 1744 Miss Lucas married Col. Charles Pinckney, and they made their home at Belmont, five miles from Charles Town, on the Cooper River.

Here this young woman, with a view to exporting to England the indigo for which it depended upon France and Germany, began the cultivation and making of indigo. In her efforts she was greatly assisted by the earliest of Carolina botanists, Dr. Garden, in whose honor we have today the "gardenia."

Mrs. Pinckney secured the seed from the West Indies, cultivated the plants, cut the leaves in due season, and produced indigo. She furnished seed to her neighbors, and in 1747 enough indigo was made to make it worth while to export it to England, where a bounty of sixpence a pound was offered by England, "in order to exclude the French indigo from her markets."

Indigo became the chief highland staple for more than 30 years, and just before the Revolution the annual export amounted to 1,170,660 pounds. So here is what one woman did for the "infant industries" of a new country. The interesting record shows that indigo has been and can be again made in this country.

We have no doubt that great improvement has been made over the brick vats and crude methods employed by Mrs. Pinckney, but she settled the fact that indigo can be raised in South Carolina, and as England kept the French indigo from her markets, we may learn to be independent of Germany.—Norfolk Ledger-Dispatch.

*Statement made before Federal Trade Commission and furnished to MANUFACTURERS RECORD by Armour & Company.

Extensive Road Construction in Florida

By G. R. RAMSEY, Highway Engineer.

The contracts for the construction of 57 miles of brick roads in Orange county were awarded by the County Commissioners on February 3, 1915.

Roadway No. 1, running south from the southern city limits of Orlando to the Osceola county line, a distance of 13 miles, was awarded to the Alabama Paving Co. of Birmingham, Ala. Work was commenced on it April 1. About 10 miles of this road has been completed to date. Following the general custom as practiced in Southern Florida, the brick are laid flat on a foundation of sand only, and held in place by a 4 by 10 concrete curb molded in place on the ground. The immediate effects of the construction of this road through this territory has been the incorporation of the Taft Drain-

Roadway No. 5 was awarded to R. M. Hudson of Atlanta, Ga. This commences at the northwestern city limits and runs through the towns of Lockhart, Piedmont and Apopka, with its terminus at Plymouth. Work was started in March, and about 10 miles will have been completed by August 1.

Roadway No. 4 was awarded to the Southern Clay Manufacturing Co., but as yet nothing has been done on this road. It is hoped, however, that work will commence not later than August 10. When completed it will serve one of the most highly-developed garden-truck districts in the State of Florida, as well as one of the finest citrus-fruit sections. The towns of Ocoee, Winter Garden, Tildenville and Oakland will be in more direct

It is very necessary, in the construction of highways where no foundation other than sand is used, to see that particular care is taken in the preparation of the base. Too much attention cannot be given to the rolling. For this reason 10-ton rollers are used on all the work. When the fills exceed eight inches in depth they



FLORIDA BRICK ROAD BEFORE GROUTING.

are brought up in layers of eight inches, each layer wetted down and thoroughly rolled until compact. Whenever the fills exceed 18 inches in depth they are made from six weeks to two months in advance of the time when the brick are to be laid, thus insuring settlement. Where the wire-cut-lug brick are being laid a 2 by 8 heart-pine plank is used as curbing. The curbing being set, the trenches are back-filled and water-tamped and the grade again wetted down and rolled with a five-ton roller, after which the base is shaped with a template preparatory to the laying of the brick. If proper care is exercised in pulling the template, it is unnecessary to use sand as a cushion. Care must be exercised to see that the base is kept damp in advance of the laying of the brick, otherwise the rolling of the brick will cause the sand to squeeze up, thereby filling the space with sand which should eventually be filled with grout. The grouting of this work was started, using the regulation grout boxes, but after a mile of the work had been completed a grout mixer manufactured by the Marsh-Capron Manufacturing Co. of Chicago was placed on the work. The results obtained from this mixer were better than the old method, for the reason that it can be placed directly where wanted without slushing with squeegee for long distances. The work has been very much facilitated by the use of this machine, as an average of 1200 yards a day has been maintained since it was put on the



COMPLETED CEMENT-GROUTED WIRE-CUT-LUG BRICK ROAD IN ORANGE COUNTY, FLORIDA.

age District. When the canals are completed over 52,000 acres of good agricultural land will be available for settlement.

Roadway No. 2 was awarded to the Southern Clay Manufacturing Co. of Chattanooga, Tenn. The first brick in the entire system was laid on this road on March 31, and the road was completed and thrown open to traffic on May 1. The construction of this road was along the same lines as roadway No. 1. The effect of this road on general conditions is thus referred to in a recent issue of the Orange County Citizen:

"The whole city turns out for a drive on the Conway brick road. They see improvements on ever hand. Homes being built and others painted. Gardens alive with flowers. The best farms in the county. Great fields of corn, melons, beans, etc. Lands are being sold. Prosperity is rampant. People look like folks; they seem to have the wrinkles of care wiped out. Only the chronic kicker, which every community is troubled with, remains, and he is good-naturedly tolerated.

"Inquiry among the residents of that section shows that they are accomplishing two days' work in less than one day, where hauling of building materials, melons to the railroad, farm crops, etc., are concerned."

touch with the county-seat. The type of construction on this road will be in part brick laid flat with sand filler, and part wire-cut-lug brick, cement grouted.

Roadway No. 3 was awarded to and is now being constructed by the Southern Clay Manufacturing Co. from the northern city limits through the towns of Winter Park and Maitland to the Seminole county line. Upon the completion of this section of highway and the completion of roadway No. 1 a unit in the Dixie Highway 23 miles in length will be ready. When the original bids on this highway were made they were for a nine-foot brick road, with sand filler and concrete curb. The contractor, however, made an alternate bid to construct this section using wire-cut-lug brick (manufactured under the Dunn patent), with grout filler. This was accepted by the County Commissioners, and upon the completion of this road, about August 1, Orange county will have the first grouted highway in the State of Florida. That grouted work will eventually be adopted by those who wish to build dependable roads there can be no doubt; hence the method being employed may be of interest.



INSPECTING FLORIDA BRICK ROAD BEFORE GROUTING.

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work. After initial set has taken place the roadway is covered with sand to the depth of an inch or more and thoroughly wetted down and is kept in this condition for four or five days and the pavement is kept closed for two weeks before traffic is allowed upon it.

The brick used on this work were made by the Southern Clay Manufacturing Co. at its Robbins plant, and the average result of the tests on the entire road has been about 22.

In addition to the nine feet being built by the county



SQUEEGEEING GROUTING ON FLORIDA BRICK ROADS.

through Winter Park, the City Council has built 30 additional feet in width through its business section, making the pavement 39 feet wide. They have recently passed a bond issue, a portion of which will be used in building additional brick streets.

Much has been said recently in magazines relative to the construction of brick roads in Florida. If the cities and counties will pass adequate ordinances for the protection of their streets and roads; if they will see that all service mains of whatever nature are placed in the



GROUTING FLORIDA BRICK ROAD WITH MACHINE MIXER.

ground prior to the laying of the pavement; if they will employ competent engineers and place them in charge of the work, there is no question that dependable streets and highways will be the result. Many officials from other parts of the State have visited the Orlando-Maitland road during its construction, and so general is the expression of approval by them that the writer is led to the belief that the results will be far-reaching and that this is only the first of many roads that will be built in the State of Florida using grout instead of sand as a filler.

INDUSTRIES HELPED BY IDEAL CLIMATIC CONDITIONS.

Western Carolina Counties Prove to Be a Paradise for Dairymen.

[Special Correspondence Manufacturers Record.]

Boone, N. C., July 24.

Up here in these high mountains, on the cool, rich and green north side of the Blue Ridge, it is a different world. For many a fair mile the view stretches, park-like in its supreme beauty. It is a world of swift and clear streams and in the main a tableland with a mean elevation of 3000 feet above sea level; yet, looked at in detail, low mountain ranges and rich valleys are found to alternate. The result is a condition absolutely ideal for cattle-raising and dairying. The valley lands are worth \$200 an acre, though the hay is cut but once a year, generally in August, and then the cattle, which have summered on the slopes, are turned into the lowland and there become, as the farmers say, "seal-fat." Shorthorns and Herefords are the favorites; in fact, all the cattle are of these two breeds. Of scrubs there are none. The last of them went to pot years ago. There is no scrub stock of any kind.

The United States Agricultural Department has had its eyes on the counties of Ashe, Alleghany and Watauga for a year or more in the matter of development of cheese-making, and has sent experts here. As a result there has been established on Cove Creek, seven miles west of Boone, the first cheese factory south of Pennsylvania. Here it is found that the number and the coldness of the springs afford unrivalled facilities for keeping milk, and that no ice is ever necessary; nor is it used at all in a region where every man can for a trifle have cold running water in his home, piped from some bold hillside fountain, and where the streams themselves are cold all the year around.

So on the 5th day of last June cheese-making began at the point already referred to. The Cove Creek Co-operative Cheese Co. was formed by 35 farmers, their stock being mainly Shorthorns, with a few Herefords. The factory was built and equipped and supplied for a year for the small sum of \$550. It is found that the cost of building, as of many other things in this region, is barely one-fourth what it would be down State.

The primitive conditions are well illustrated by the fact that no one outside of the cheese factory region has ever sold any milk. It is given away to any traveler or to neighbors who do not have a cow. Plenty of butter is made for home use; there is always milk on the table, and the hogs get the rest.

The average amount of milk handled at present in this Cove Creek factory is 100 gallons daily. A gallon weighs 8.6 pounds, and it requires 9½ pounds of milk to make one pound of cheese. Hundreds of people have been to see the factory, and within a year there will be five patrons where there are now one, for at present it is getting milk from about 150 cows. At first the milk was taken to the factory in all sorts of vessels, including jugs, which, of course, had been sterilized, but now it is brought in regular cans, and the quality is uniform and very high. The cold springs make it easy to keep milk, and, as the expert sent by the United States Agricultural Department remarked, they are a big advantage. He is from Minnesota, and says no part of his own State excels this as a cheese region. The capacity of the plant is 200 gallons a day, and is to be increased to 400 gallons next year. At present the average daily product is 80 pounds. Cheeses are made from one pound weight upward. The little fellows sell at 13 cents a pound and the larger ones at 16 cents. The shipments are mainly made to Elizabethton, Tenn., by wagon and train, and laid down there; the price averages 15½ cents. It is found that the cheese will bring more than Northern cheese and it ranks in quality with the best English Cheddar.

Hauling is a costly business in this region, where railways are so far apart and where as yet the gospel of good roads has never been preached. Not one of the three counties named has ever spent a dollar for roads. But the freight rates, that is, the wagon hauling, are so great that something is bound to happen. From the factory it costs 60 cents a hundred pounds to haul the cheese to Lenoir by way of Blowing Rock, where the toll turnpike crosses the Blue Ridge at an elevation of over 4000 feet, the distance between the factory and Lenoir being 40 miles. The very high tolls are talked

about constantly and are doing as much as anything to create what may be called a passion for a railway. The rate for hauling from the factory to Neva, a point on the Virginia & Southwestern Railway in Tennessee, is 30 cents a hundred pounds, the distance being about 21 miles.

Watauga being, as stated, the pioneer in all the South in expert cheese-making, two other counties have fallen in line, and at Grassy Creek, in Ashe county, there is another and even larger factory which began operations three weeks ago. A third began work last week at Whitehead, in Alleghany county, not far from Sparta, the county-seat. The one at Grassy Creek is the largest of the three, and it is not far from the Norfolk & Western's new branch, which extends all the way across Ashe county. It is hard to say which of these three counties, lying in a row and all having the great wall of the Blue Ridge as their southern boundary, is the finest for cheese-making, cattle-raising and grass and grain growing; but little Alleghany holds the State record so far in all North Carolina's 100 counties for average production of corn to the acre.

The people here say that as soon as one railway comes into Watauga there will be others. The survey is on by the Norfolk & Western to Boone, and the East Tennessee & Western North Carolina has made its definite plans for building through the Linville River gorge to Shull's Mills, on the Watauga River, not far from the Cove Creek cheese factory. From Shull's Mills it will come up Laurel Fork and Boone's Creek into Boone and have its station in front of the Appalachian Training School, which is maintained by the State for the special training of teachers and others for this much shut-out mountain region, which certainly—and the writer has seen them all—has no superior in any respect in all the South.

FRED A. OLDS.

Prosperity from Living at Home.

Pascagoula, Miss., August 5.—[Special].—The Marine Railway that the United States has been building at its Naval Reservation on Lowery Island, near this city, an account of which has already appeared in the MANUFACTURERS RECORD, has been completed and is now in full operation. Coal barges, steam tugs and pontoons in quite a number are lying near awaiting an opportunity to be hauled out. Some 52 men are now on the payroll, most of whom are skilled mechanics.

The Home Preserving Co., of which an account appeared in the MANUFACTURERS RECORD in 1914, did this year double the capacity of its plant and put up an extra large quantity of "preserved figs," the fig season being an unusually good one. The fig season lasted about six weeks. The principal markets for "preserved figs" such as mother makes are New York, Philadelphia and St. Louis.

The acreage planted in corn this year near this city has been twice or three times as large as at any other year, and the harvest has been a good one, showing that the soil near the Gulf coast is well adapted to this cereal, as it has been shown to be adapted to sweet, Irish potatoes and onions and garden truck. Hard times has had the good effect of making people who hitherto have neglected the soil turn to it for food and comforts of life, there being more amateur gardeners this year than has ever been known before, and the prospects that the number will increase during the coming season. The success of others making new converts to this most healthful, profitable and pleasing occupation of one's leisure time.

Industrial Opportunities at Statesville, N. C.

Statesville's suitability for an industrial development is strongly set forth in a pamphlet recently issued by the Chamber of Commerce of that city. Situated in the Piedmont section of North Carolina, Statesville has the advantage of an excellent climate and is surrounded by very fertile lands for agricultural, horticultural and stock-raising purposes. Within a radius of 100 miles there are four extensive hydro-electric plants, developing 250,000 horse-power, and the availability of cotton and various other natural resources and the proximity of markets for the manufactured product give the Statesville district advantages as a point for the development of various kinds of industrial enterprises.

Unique Methods Adopted to Cap a Burning Gas Well

[Special Correspondence Manufacturers Record.]

Oilton, Okla., August 7.

The burning gas well is always one of the greatest menaces that a producing field has to face. The danger is not only to the surrounding property, but also to the entire field through the great depletion of the gas supply. This was demonstrated in this immediate field several months ago, when the big gas well on the Cimarron River bed, in the heart of the field, burned wide open for several weeks. Oil men now declare that this excessive waste of gas was responsible for the heavy decrease in the production of the big oil wells in its neighborhood.

Fighting a burning gasser has also been one of the greatest problems of an oil field. Many methods were adopted, the big majority of them in vain, and for a number of years the biggest fires of this kind continued to burn and destroy in spite of all the efforts put forth to stop them. In more recent years, however, strategy has been employed in a number of instances and has proved to be successful where theories have failed absolutely. In fact, a wise head in an oil field that can quickly devise a plan to put out a burning gas well really ranks with Johnny Evers, Field Marshal Mac-kensen and Tod Sloan—men who rely on their wits when sorely pressed.

The big gasser that burned for about six years in the Caddo field of Louisiana gained the greatest distinction, no doubt, that the oil world has ever known. It roared and boiled, shot its flames high in the air and attracted visitors by the hundreds for years before it was finally conquered. Its crater had become over 100 feet wide at the top, and had a depth of at least 75 feet. In this cauldron was a mixture of mud and water, gas and flames, a boiling, seething mass; occasionally the gas pressure would send the mixture from 50 to 100 feet in the air. The forest for a radius of several hundred feet was killed, and the well was considered a menace to the entire field during all the years that it burned.

Control of the burning gasser, on the Cimarron just north of Pemeta, was accomplished by a trick. A heavy wire cable was stretched over the top of the well and through the gas flame. Then a piece of casing was drawn along the cable until it could be dropped over the hole. The fire then went up the casing, issuing at the top. By giving the cable a quick relax the gas was separated from the flame and the fire was out.

This gas well came in with an initial flow of about 60,000,000 cubic feet a day, and when the fire was extinguished three weeks later the output had decreased to about 20,000,000 cubic feet daily, so that 40,000,000 cubic feet daily represented approximately the drain on the gas pressure in that immediate vicinity. In 20 days this would aggregate the tremendous total of 800,000,000 cubic feet of gas destroyed from the area around the well.

That the waste of gas from this well would no doubt have an effect on the longevity of oil wells around it is the opinion expressed by a Tulsa pipe line official and affirmed by other oil men. The flow of the wells in this field is due, it is understood, to gas pressure instead of water pressure, at least in the vast majority of cases, and the violent exhaustion of so much of this pressure through the burning gas well would no doubt shorten the life of the oil wells in its neighborhood by at least three months, it is said, and perhaps more.

Another burning gas well in the North pool of the Cushing field that attracted more than ordinary attention was the initial well drilled by the McMan Oil Co. on the Walter Starr allotment, about midway between Pemeta and Oilton. This burning gasser also continued for some time before the flame was extinguished, which was also accomplished by a trick.

The company desired to drop a reducing nipple over the hole; it was attached to one end of an elbow of pipe, with a long string of casing attached to the other end. Finally, one of the employees suggested that one of the heavy wagons used on the lease be pressed into service to carry the elbow over the top of the hole. His idea

was that when the wagon burned up the elbow would drop, covering the hole.

The elbow with its string of casing attached was loaded on the wagon, and by means of a cable fastened to the rear axle it was pulled into the gas flame and to a point where the reducing nipple was directly over the hole. The plan worked all right, excepting that one side of the wagon burned more quickly than the other, and when the elbow fell it rested on one side of the hole, without covering it.

One wagon had been burned in the attempt, and then the second was brought into use. A heavy piece of casing was loaded and the wagon was pulled into the fire in the same manner as the first, but with the casing just to one side of the elbow. When the wagon burned and the casing fell it struck the elbow just right to cap the hole. The fire was so hot that the welding was made perfectly. Then, to put out what fire there was left, steam was turned on it from the engines.

One oil field workman suggested that the gas flame be separated with a shot of dynamite and he offered to do the trick for \$500. His idea was to shoot the flame in two, thus separating the gas from the fire.

The United States Government has adopted the method of using mud, slushy mud, to put out gas fires. This is pumped into the hole until the fire is quenched. This method has been used successfully in this field, and also in the Healdton and Muskogee fields. This is also a trick that only the well-posted expert can put over successfully, and it was devised by one of the experts employed by the Government.

"After War Is Over."

Editor Manufacturers Record:

We note that a Holland correspondent of an American trade and manufacturing journal is forecasting coming changes in channels of the sugar trade of Europe. Going back a hundred years ago, the West India Islands, owned by nations of Europe, were very prosperous, making sugar, molasses and rum. About this time war between France and England endangered the sugar supply of France, and the Great Napoleon ordered the French chemist to produce sugar from beets, the yield of sugar then being about 6 per cent, and now the yield is about 16 per cent. At this time (1914) the world's beet-sugar crop, grown in Europe and the United States, equals half of the world's production.

Bear in mind this change in less than a century has been wrought by war and tariff legislation of European States. The prosperity of the West India Islands has been declining for a century, and there are to be found at this time on the little British island of Barbados, east of Cuba, windmills for the grinding of sugar-cane. For more than two centuries the world has stood still or gone backward on the British-owned possessions of said islands and mainland of British Guiana. For more than a half-century the tariffs on imports of Great Britain and Germany have been opposite. Germany has in the past 50 years developed a vast beet-sugar industry and the United Kingdom furnished a market.

This war, of which England and Germany have the leading parts, will in a few years come to a close for want of gold or its equivalent, as this is the great "sinew of war." After the war Great Britain will revise its import tariff on sugar and develop its Western hemisphere possessions, and this will benefit the trade expansion of American manufactured sugar machinery that now leads the world.

There is just now one spot on earth that is prosperous, and that is the Republic of Cuba.

The cotton South, against its will, is forced to grow food crops, and this is the first step in Southern manufacturing of its raw material. The world's evolution in commerce and transportation will result in changing ideas of government in the Southern States.

A. E. KENNEDY.

Monroe, La., July 31.

Prosperity from Diversification in Mississippi.

Gloster, Miss., August 6.

Editor Manufacturers Record:

One has but to keep his ears to the ground in South-west Mississippi to note the gradual developments of the great natural advantages of this section, which prior to the boll-weevil was unheard of, nor could you have made the average man believe any such opportunities ever existed. I have called the attention of the readers of the MANUFACTURERS RECORD to the discoveries of various grasses, especially the hemp weed, as one of the best hog-grazing weeds that was ever known. Following this line of thought, the idea of cattle grazing was adopted by some, with result that it is attracting capital from all parts of the North. It is being demonstrated by Amite county lands that cattle can be purchased in St. Louis, Memphis, New Orleans and other markets and shipped here in early spring and resold in September and October at a price netting the buyer from 60 to 100 per cent. These lands can be rented cheap, and the cost of handling the cattle is practically nothing, as the natural foliage and grasses grow in an abundance. In some instances capital of the North is dividing the profits with landowners, and each are making handsome dividends on the investment. It is said one acre of land is sufficient to maintain one head of cattle, and there are hundreds of farmers here with from 100 to 1000 acres of land made idle by the weevil. The average cow will increase in weight from 75 to 125 per cent. It has also been discovered that the Spanish peanut is without equal as an egg producer with poultry raisers. The winters are very mild here, and 50 per cent. of the cattle find sufficient grazing to winter themselves. I know of one instance where four cows were wintered on \$2.50 worth of hay and 25 cents' worth of salt, so you will readily see that all it required in this case was just enough to let the cows know that they had a home.

O. P. McPHERSON.

Exposition of Chemical Industries.

Reports concerning the National Exposition of Chemical Industries, to be held in New York the week beginning September 20, indicate that there will be a very large representation of exhibits of manufacturers throughout the country. An interesting feature will be the working exhibits, in which will be included a number of new processes which will have their initial presentation to the public at this time. Moving pictures of industrial and commercial plants will be shown in operation. Lectures will be given on various chemical industries. Chemical engineering and engineering societies will have meetings during the exposition.

Co-operation is being given by the Bureau of Foreign and Domestic Commerce at Washington. There will be a Canadian section, with a collection of exhibits made by Canadian manufacturers, and a considerable exhibit being foreign manufacturers is anticipated.

In view of the increased interest now felt in the development of chemical manufactures in this county on account of the deficiency in chemical products caused by the European war, it is evident that an opportunity exists for an exceedingly interesting and important meeting of chemical manufacturers and technologists.

The exposition has been organized by Messrs. Nagelvoort and Roth, with executive offices at the Grand Central Palace, 46th street and Lexington avenue, New York.

Construction Activities at Parkersburg.

Parkersburg, W. Va., August 3.—[Special].—Henry H. Archer, secretary of the Board of Commerce, Parkersburg, W. Va., cites the municipal activities as evidence that it is the liveliest city in the State. Three bank buildings are in process of erection and a high school costing \$250,000. A similar sum is being spent on street paving; \$600,000 is being spent on a power plant, and the street railway company is spending \$400,000 on improvements. A bridge costing \$500,000 is being built across the Ohio River, paralleling the railroad bridge, and the Baltimore & Ohio Railroad is spending \$500,000 on its freight terminal.

Our Export Trade's Phenomenal Record

SOME STRIKING FACTS SHOWING THE INCREASES AND DECREASES IN OUR FOREIGN TRADE.

One of the most striking facts connected with the export trade of the United States for the fiscal year ended with June, as shown in official figures just issued, is the phenomenal increase in our exports to the Netherlands, Norway, Sweden and Italy. The total shipments of domestic merchandise to these four countries for the year figured up \$445,000,000, as against \$210,000,000 for the preceding year, a gain of \$235,000,000, or largely more than 100 per cent., thus to a very considerable extent offsetting the decline in direct shipments to Germany.

More than one-third of our export trade for the year was to the United Kingdom. If Canada be included, the aggregate for the United Kingdom and Canada equaled 44 per cent. of our exports, the total for the two being \$1,112,000,000. Next to the United Kingdom came France, with \$369,397,000, a gain of \$210,000,000 compared with the preceding year, while the gain to the United Kingdom was \$317,000,000. This gain to the United Kingdom and France exceeded by \$130,000,000 the net gain in our total exports.

Among the countries which showed a large decrease were Austria-Hungary, with a decline of \$21,500,000; Belgium, more than \$40,000,000; Germany, \$316,000,000; Canada, \$40,000,000; Argentina, \$12,500,000; Brazil, \$4,000,000; China, \$8,000,000; Japan, \$9,700,000, and Australia, \$2,000,000.

While there was a decrease to South American and Asiatic countries, as well as to Austria-Hungary, Belgium and Germany, there were, as stated, notable increases, including \$110,000,000 to Italy, \$31,000,000 to the Netherlands, \$30,000,000 to Norway and \$63,600,000 to Sweden, while Russia in Europe showed a gain of \$7,000,000. The increase to Italy, the Netherlands, Norway and Sweden were so heavy as to indicate that much of the stuff which they bought from us found an outlet through them to Germany. Norway, for instance, jumped its imports from the United States from \$9,000,000 to \$39,000,000, Sweden from \$14,600,000 to \$78,200,000 and Italy from \$74,000,000 to \$184,000,000.

Southern Building in July.

The following figures as compiled from reports from representative cities present a brief summary of Southern and Southwestern building operations during July. The cost of new improvements for which permits were issued in Baltimore is estimated at \$1,542,500, additions \$157,491 and alterations \$50,000, making a total of \$1,749,991. For the first seven months of the year permits were issued for new improvements to cost \$6,381,429, alterations \$346,800 and additions \$485,887, making a total of \$7,215,116.

Operations in the District of Columbia amounted to \$1,424,207, of which \$1,235,127 represents the cost of new construction, while \$189,080 was expended for repairs. Construction work was distributed as follows: County, \$974,802; Northwest, \$140,700; Northeast, \$92,675; Southeast, \$26,950, and Southwest, none.

A total of 62 permits was issued in Norfolk, Va., representing a cost of construction of \$163,575. As compared with July, 1914, these figures show an increase of 4 in the number of permits and a decrease of \$57,375 in the cost of construction. In Richmond a total of 130 permits was issued, representing a cost of construction of \$328,667, a decrease of about \$140,000 as compared with the corresponding month last year. The total cost of new construction for which permits were issued from January 1 to July 31, inclusive, is estimated at \$1,797,320 and alterations and repairs at \$266,000.

Permits were issued in Winston-Salem, N. C., during the month to the number of 78, which represent a cost of construction of \$57,275, while the cost of construction for which permits were issued in Raleigh is estimated at \$21,305. In Durham the cost of construction for which permits were issued is estimated at \$21,700, and in Greensboro at \$10,010.

The cost of construction for which permits were issued

With a decrease in imports during the fiscal year ending June 30 of \$219,000,000, as compared with the preceding year, there was a net increase of \$387,000,000 in exports of domestic merchandise. The increase for the month of June in exports was \$110,000,000 over June, 1914. The balance of trade in our favor for the year was \$1,094,000,000, as against \$470,000,000 for the preceding year.

Of the increase in exports, there was a phenomenal gain of \$529,000,000 in foodstuffs, offset in part by a decrease of \$283,000,000 in the exports of crude materials for use in manufacturing.

The total export figures for the year were as follows:

Exports.	1914.	1915.
Crude material for use in manufacturing	\$792,716,109	\$569,436,254
Foodstuffs in crude condition and food animals	137,495,121	507,064,610
Foodstuffs partly or wholly manufactured	293,218,336	452,767,729
Manufactures for further use in manufacturing	374,224,210	357,459,326
Manufactures ready for consumption	724,908,000	808,634,402
Miscellaneous	7,122,249	80,816,144
Total domestic exports	\$2,329,684,025	\$2,716,178,465
Foreign merchandise exported	34,895,123	52,410,875
Total exports	\$2,364,579,148	\$2,768,589,340

The detailed figures showing our exports to foreign countries for the year as compared with the preceding fiscal year are as follows:

Principal countries.	1914.	1915.
Austria-Hungary	\$22,718,258	\$1,240,167
Belgium	\$61,219,894	\$29,662,315
France	\$159,818,324	\$399,397,170
Germany	\$344,794,276	\$28,863,354
Italy	\$74,235,012	\$184,819,685
Netherlands	\$112,215,673	\$143,267,019
Norway	\$9,066,610	\$39,074,701
Russia in Europe	\$30,988,643	\$37,474,380
Sweden	\$14,644,226	\$78,273,818
United Kingdom	\$594,271,863	\$911,792,454
Canada	\$344,716,981	\$300,692,405
Mexico	\$38,748,793	\$34,164,445
Cuba	\$68,884,428	\$75,530,382
Argentina	\$45,179,069	\$32,549,606
Brazil	\$29,963,914	\$25,629,555
China	\$24,698,734	\$16,492,475
India, British	\$10,854,591	\$11,696,094
Japan	\$51,205,530	\$41,514,792
Australia	\$45,775,216	\$43,620,676

in Greenville, S. C., is estimated at \$5120, as compared with \$48,210 for June.

Operations in Birmingham, Ala., for July aggregated \$223,987, as compared with \$240,960 for June. Frame residences were the most important feature of construction, involving an expenditure of \$55,097. The total number of permits issued was 367.

The cost of construction for which permits were issued in Atlanta, Ga., during July was estimated at \$608,936. As compared with July, 1914, these figures show an increase of \$113,000. Permits were issued in Macon during the month for construction estimated to cost \$54,959.

In Jacksonville, Fla., permits were issued for construction to cost \$187,382, including a concrete and steel bridge to cost \$11,000. Permits were issued in Miami for construction to cost \$78,900, an increase of about \$59,000 as compared with July, 1914. For the first seven months of this year the value of operations was estimated at \$543,700, as against \$338,925 for the corresponding period last year.

A total of 212 permits was issued in Louisville, Ky., representing a cost of construction of \$548,740, and exceeding the figures for July, 1914, by about \$65,000.

Permits were issued in Shreveport, La., to the number of 92, representing a cost of construction of \$46,884.

In Dallas, Tex., the value of operations for the month is estimated at \$636,124, an increase of more than \$400,000 as compared with June. For the period from June 27 to July 26, inclusive, the value of operations in Galveston was estimated at \$128,476, representing a total of 233 permits. Houston's operations for the month are valued at \$164,720, while the cost of construction for which permits were issued in Waco is estimated at \$39,709, and in San Antonio at \$159,250, the latter figures representing a total of 181 permits. As compared with June, San Antonio shows an increase

of 10 in the number of permits and \$62,405 in the cost of construction. The cost of construction for which permits were issued in El Paso is estimated at \$241,186, an increase of about \$5000 as compared with June. Permits were issued in Fort Worth for construction to cost \$220,029, as compared with \$186,175 for July, 1914.

A total of about 340 permits was issued in Kansas City, Mo., for construction to cost about \$1,400,000. These figures show an increase of about \$650,000 as compared with June and \$387,945 as compared with July, 1914.

The cost of construction for which permits were issued in Tulsa, Okla., was estimated at \$242,865.

Cannot Do Without the Manufacturers Record

LOVILL & LOVILL,
Attorneys-at-law.

Boone, N. C., August 2.

Editor Manufacturers Record:

We enclose contract for three years' subscription to your valuable journal. It's the greatest document published in the whole South. We cannot do without it.

Yours very truly,

LOVELL & LOVELL.

Every Issue Worth the Price of Subscription.

S. Q. SEVIER,
Attorney-at-Law,
Camden, Ark.

August 2, 1915.

Editor Manufacturers Record:

Please find card for two years' subscription, properly signed. I appreciate this offer. The MANUFACTURERS RECORD is doing a great work for the whole country, and if we had more such periodicals and the mass of the people would read them this republic would go forward by leaps and bounds. There is not a single issue of the MANUFACTURERS RECORD which is not worth intrinsically more than the price of a year's subscription.

Yours truly,

S. Q. SEVIER.

West Virginia's Strong Situation.

The West Virginia Board of Trade, a non-partisan business organization formed 10 years ago which has the active support of many of the leading citizens in the work it is doing for West Virginia's advancement, in a letter to the MANUFACTURERS RECORD gives what it says is a fair and unbiased statement in behalf of that Commonwealth, and knowing West Virginia as the MANUFACTURERS RECORD does, we feel sure that this is indeed a true statement of the situation. The letter, signed by Mr. R. B. Naylor, secretary, and Louis Bennett, president, is as follows:

"On behalf of the West Virginia Board of Trade, the only general association in the State, including in its membership numerous leading commercial organizations and representatives of every department of commerce and industry, we desire to make the following statement:

"West Virginia is not now, and never has been, financially embarrassed, as represented by numerous reports spread broadcast over the country, based on idle rumors and misinformation. Like many other States, West Virginia has lost revenues by reason of the enactment of prohibition laws, and has also been called upon to meet some unusual expense in connection with labor disputes in one small section, such as occur in any great industrial community, but successive sessions of the Legislature have met these difficulties by proper legislation, and West Virginia's credit should and does stand as high in the field of finance and government as any State in the Union.

"It is not true that West Virginia has in any way failed to meet any of its obligations. On the contrary, the State is going forward as usual, meeting its expenses, paying its just debts and looking forward to the future with confidence.

"West Virginia's position is solidly founded upon natural resources and individual enterprise which have given it an enviable place among the States of the Union. It stands second in coal production, with 72,800,000 tons to its credit last year; first as a natural gas producer, with an output valued at \$35,000,000 last year; near the top as an oil producer; among the first in the lumber industry and a manufacturer of growing importance of iron, steel, tinplate, glass, pottery, leather, wood pulp and many other staple commodities.

"The banks of West Virginia reflect the State's finan-

cial soundness, with total deposits which have nearly doubled since 1905 and now stand at upwards of \$137,000,000.

"West Virginia is not controlled by any clique or ring, and its changing front in State and National elections shows the free and independent spirit of its people, while its responsiveness to enlightened influences is evidenced in the Public Service Commission law, Workmen's Compensation act and other legislation designed to protect and advance the best interests of the whole people.

"West Virginia has been unique among the Commonwealths of the Union in its freedom from any bonded debt. No such obligation can be incurred under the Constitution, and the country may rest assured that the Virginia debt problem now confronting us will be solved honestly and equitably.

"West Virginia's splendid resources, its record of achievement and the integrity and enterprise of its people are sufficient guarantee that it is amply able to take care of itself and meet fairly and squarely its duty when its duty is plain."

Cottonseed Oil and Oleomargarine.

Mr. J. J. Culbertson of Paris, Tex., the president of the Interstate Cottonseed Crushers' Association, has issued the first of a proposed monthly letter to the members in which he has discussed various matters pertaining to the welfare of the cottonseed industry. In this, referring to the oleomargarine industry, Mr. Culbertson says:

"Our friends, the dairy people, are getting busy in a campaign having for the purpose the limitation of color in oleomargarine. If there ever was a time when we need to enlarge our domestic consumption of cottonseed oil it is right now, because of the interference with our export trade, and we feel that if our administration would uphold the principles of its party platform that there would be no trouble in having this vicious class legislation repealed and tax abolished. If this could be done the increase in consumption of cottonseed oil in the manufacture of oleomargarine would be considerable because of the improved methods in hardening, etc. Our new chairman of our legislative committee, Mr. Ashcraft, is whetting his bowie-knife and getting his ammunition in order, and I expect we shall soon hear something from our side. Ashcraft usually gets what he goes after, even if it is a piece of the seat of the pants of the other fellow. It may be so in this case."

Completing a Gulf Coast Highway.

Pascagoula, Miss., August 7.—[Special].—The convict gang, under the direction of the Board of Supervisors of Jackson county, Mississippi, is now at work building the last link of the chain of the speedway from the Alabama line to the Pascagoula River, through Nine Mile Lake, so called, but which is in reality an extensive tract of morass which in the rainy season is overflowed by the Pascagoula River on one side and the Gulf of Mexico on the other. The completion of this work, which will be done within two weeks if weather is favorable, will make a complete automobile highway from Mobile to the Pascagoula River and from the Pascagoula River to Biloxi and Gulfport. There are now two automobile ferries over the Pascagoula River, one at Pascagoula, of which mention has been made, and another at Moss Point, four miles farther north.

Sloss-Sheffield Improvements.

Referring to his company's plans for immediate improvements, J. C. Mahen, Jr., vice-president of the Sloss-Sheffield Steel & Iron Co., Birmingham, writes to the MANUFACTURERS RECORD as follows:

"We are spending about \$50,000 at our Russellville brown-ore plants in Franklin county, Alabama, such improvements consisting of about 6000 feet of 10-inch pipe line; a 10-inch two-stage centrifugal pump, electrically driven, to provide additional water for the brown-ore washers; a central power station, consisting of two Westinghouse turbon-generators of 300 kilowatts capacity each; several miles of copper transmission line

on creosoted poles leading to the pumping station and various washers, and electrical motors to drive three of the present washers (the other two to be electrified a little later), the voltage of the generators to be 2400 stepped-up to 6600 volts for transmissions, and used at the motors at 2200 volts and 550 volts. The powerhouse will be of brick and concrete construction, with metal sash, windows and doors. The improvements also contemplate doubling the water storage capacity at our central pumping station by raising the dam, which is about 1000 feet long and 3 feet high, and providing a new concrete spillway and relief valves in the bottom. Material for this work has been ordered, and we expect to have the improvements in use within the next 60 days.

"The report covering expenditures at North Birmingham furnace is erroneous. Plans for these improvements at the furnace are under way, but have not matured, and no appropriation for the same has yet been provided."

Large Bank Merger at Fairmont, W. Va.

The National Bank of Fairmont, according to a report from Fairmont, W. Va., has taken over the First National Bank of that place. J. E. Watson is president; Jacob S. Hayden and Walton Miller, vice-presidents, and Glenn F. Barnes, cashier, of the National Bank of Fairmont, whose capital is \$400,000, with surplus of \$600,000, undivided profits of \$54,000 and deposits of \$2,300,000. The capital of the First National Bank was \$200,000, surplus and profits \$136,000 and deposits \$2,000,000. Thus the combined deposits will be about \$4,300,000.

Camden Organized for Development.

Camden, Ark., August 7.

Editor Manufacturers Record:

The citizens of Camden have organized a commercial league to be known as the Camden Public Service Bureau. Its object is to advertise Camden and its advantages and by other means to try to induce immigration and factories to locate there.

A fund of several thousand dollars has been raised for the purpose. The enterprise has been in operation for nearly two months.

Mr. W. T. King of Little Rock has been elected secretary, and is devoting his time to this work.

Camden is prepared to offer favorable inducements to all kinds of factories and enterprises.

A. L. MORGAN, Mayor.

Intensive Farming in South Georgia.

"South Georgia Farmers Profit by Diversification." This is the title of a most interesting circular issued by the farm improvement department of the Atlanta, Birmingham & Atlantic Railroad, which says that probably the most striking illustrations of the benefits resulting from diversification of crops and intensive farming as practiced in that region are to be found in the vicinity of Fitzgerald, Thomasville, Douglas, Byromville, Lilly, Alma and Rockingham, where 3000 acres were planted in cantaloupes jointly by farmers and under a general plan in which they were aided by N. E. Marshburn, market agent of the line. The aggregate yield is estimated at 600,000 crates, holding 9, 12 and 15 cantaloupes each, the fruit being wrapped separately in paper.

Other products along the railroad are watermelons, corn for table use, snap beans, peaches, berries, asparagus, onions, turnips, spinach, peanuts, sweet potatoes, oats, tobacco, cotton, hay, etc. Beef cattle and hogs are also being raised successfully. Concerning cotton, it is said that the crop was never better, and while very little fertilizer was used, it bids fair to yield, acre for acre, an amount equal to the large crop of last year. This, it is claimed, evidences the value of intensive cultivation. There are several interesting and enlightening illustrations presented in the circular, which is attractively printed and contains an excellent map of the railroad.

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Scope and Purposes of the Southern Pine Association.

By CHAS. S. KEITH, President, Kansas City, Mo.

The Southern Pine Association is a trifle different from ordinary associations, inasmuch as it has no members. It is a corporation organized for the purpose of doing business profitably. It sells its service to its subscribers at a fixed compensation. A portion of the service which the association sells is made up from data furnished by the subscribers themselves for which the association pays such subscribers a reasonable compensation.

The purposes of the association and its work are along the following lines:

Under trade extension we have the questions of advertising and publicity new usages for wood and new usages for waste products to develop if possible a larger market and uses for products which are now going to waste. Many diversified efforts are covered, such as the matter of fire prevention, usage of wood blocks for paving and materials for silos and barns. The association proposes entering into the question of furnishing plans and specifications for building, and, in fact, everything that will tend to broaden or increase the use of the products of the lumbermen.

The association is working along the lines of constructive education, such as the cost of production, the best method of merchandising and prices at which lumber has been sold, the object being to educate its subscribers as to what their production is costing them and in the best and most efficient methods of handling same.

It will look into the question of transportation rates, in order that yellow pine may not be disbarred from the market by reason of traffic walls and unfair transportation rates.

It is also the purpose of the association to keep its subscribers posted on the character of legislation which is being put forth and the effect of such legislation upon their interests, in order that they may be heard in case they desire to be so heard before the various Federal and State Senate and House committees.

Its purpose is to work along every known constructive and educational line for the placing of the yellow pine business upon a higher plane and upon a more profitable basis.

The only things it will not do are to attempt to fix prices, to control production or boycott dealers or manufacturers who are not its subscribers. It proposes to keep itself clearly within the lines of the law and at no time and in no case to overstep its boundaries. Its efforts will be closely scrutinized by its counsel, and the Federal Trade Commission will be closely advised as to its efforts, as will the Attorney-General of any State or States who may desire the information.

Southern Poplar for Match Manufacture in England.

A cargo of 150 carloads of poplar logs was shipped from Portsmouth, Va., last week for Bristol, England. This timber was obtained from timber lands in Virginia and North Carolina, and it is to be used for manufacturing matches. C. L. Drawbaugh, the agent who made this shipment, is quoted as saying that English manufacturers who obtained their raw materials from Russia before the great war in Europe are now securing their poplar from the Portsmouth section, and that the European manufacturers tested poplar wood from other parts of the world before deciding upon the purchase of Virginia and North Carolina timber. He is reported as expecting to ship about 150 carloads every 60 days.

The Southern Pacific Steamship Co. announces that Baltimore has been made a port of call for its vessels, and that the first steamer to arrive is the El Mar from Galveston, which also calls at Charleston, Norfolk, Philadelphia and New York.

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Details of Week's Progress in Improvements in City and Country.

Further details of road and street undertakings and bond issues mentioned below are given under the headings Construction Department and New Securities, published elsewhere in this issue.

The MANUFACTURERS RECORD invites from its readers information about road and street work projected or under way, photographs of good roads and discussions of matters pertaining to the betterment of the highways of the South.

Bonds Voted.

Carrollton, Ky.—Carroll county voted \$50,000 bonds to construct roads.
 Chattanooga, Tenn.—City will issue \$80,000 bonds for street paving.
 Columbus, Miss.—Lowndes county voted \$50,000 bonds to construct roads in Fourth Supervisors' District.
 Gastonia, N. C.—City voted \$150,000 bonds for road construction, etc.
 Kissimmee, Fla.—City voted \$70,000 bonds for street improvements, etc.
 Livingston, Tex.—City voted \$17,000 bonds to improve streets, etc.
 Greenwood, S. C.—City voted \$100,000 bonds to pave streets.
 Salisbury, N. C.—City voted \$20,000 bonds for street improvements and sewers.
 Sinton, Tex.—San Patricio county, Ingleside Road District No. 3, voted \$75,000 bonds to construct about 20 miles of roads.
 Sumterville, Fla.—Sumter county voted \$250,000 bonds to construct roads.
 Victoria, Tex.—City will issue \$30,000 bonds for street improvements, etc.

Bonds to Be Voted.

Decatur, Tenn.—Meigs county votes September 2 on \$100,000 bonds to improve roads.
 De Land, Fla.—Volusia county, District No. 5, will vote on \$175,000 bonds to construct roads, etc.
 Fairfax, Va.—Fairfax county, Dranesville District, will vote on \$100,000 bonds to improve 11 miles of roads.
 Jane Lew, W. Va.—City votes August 23 on \$15,000 bonds to improve streets and roads.
 Jamestown, Ky.—Russell county votes August 21 on \$40,000 bonds to construct roads, etc.
 Jefferson City, Mo.—Cole county votes October 19 on \$100,000 bonds to improve roads.
 Lexington, Ky.—Fayette county votes September 30 on \$300,000 bonds for road construction, etc.
 Morgantown, W. Va.—Monongalia county, Morgan and Union districts, votes September 18 on \$140,000 bonds for road improvements.
 Palatka, Fla.—Putnam county, Palatka District, votes September 14 on \$208,000 bonds to construct brick roads.
 Philippi, W. Va.—City votes \$20,000 bonds for paving, etc.
 Rutledge, Tenn.—Grainger county votes September 9 on \$200,000 bonds to construct roads.
 South Fulton, P. O. at Fulton, Tenn.—City votes September 4 on \$60,000 bonds to improve streets, etc.

Contracts Awarded.

Attalla, Ala.—City awarded \$2628 contract to construct road.
 Augusta, Ga.—City awarded \$3199.98 contract for 7649 feet of curbing.
 Baltimore, Md.—City awarded \$34,447 paving contract.
 Bakersville, N. C.—Mitchell county awarded contract for 8½ miles of road in Grassy Creek Township.
 Chestertown, Md.—Kent county awarded contract for concrete construction, Galena-Lambson road; price \$23,919.80.
 Gadsden, Ala.—Etowah county awarded \$1903 contract to construct 3½ miles of road and \$5800 contract to improve 1½ miles of road.

Kissimmee, Fla.—Osceola county awarded contract for three miles of vitrified brick paving.

Knoxville, Tenn.—Knox county awarded \$243,000.41 contracts for about 75 miles of road construction.

Lake Charles, La.—Calcasieu parish awarded \$6000 contract for road construction.

McKinney, Tex.—City awarded contract for street paving to cost \$58,605.

Mansfield, La.—City awarded contract for 10,130 square yards of vertical fiber brick pavement, 3500 linear feet curb, etc.

Pineville, Ark.—Bell county awarded contract to grade six miles of road.

Russellville, Ark.—Pope county, Road Improvement District No. 1, awarded \$100,000 contract to construct 26 miles of macadam road.

Sarasota, Fla.—City awarded contracts aggregating \$100,000 for five miles of asphalt paving and one mile of brick paving.

Seguin, Tex.—Guadalupe county awarded contract for 12 miles of road construction to cost \$22,000.

Tampa, Fla.—City awarded contract for 9300 yards of bituminous macadam paving.

Towson, Md.—Baltimore county awarded \$31,707.90 contract to improve Reisterstown road.

Waverly, Tenn.—Humphreys county awarded \$200,000 contract for about 250 miles of road construction.

Contracts to Be Awarded.

Center, Tex.—Shelby county will expend \$120,000 on highway construction.

Concord, N. C.—City will pave streets; estimated cost \$5829.41.

Lake Charles, La.—Calcasieu parish will expend \$30,000 to surface gravel roads with tarvia concrete.

Port Allen, La.—West Baton Rouge parish will gravel about 26 miles of road in District No. 1.

Newbern, N. C.—Craven county will improve 22 miles of highway.

Newbern, N. C.—City receives bids until August 16 to repair and resurface 11,000 square yards of pavement.

Memphis, Tenn.—City will pave streets at cost of \$11,000.

Valdosta, Ga.—Lowndes county will construct four miles of road.

Paving Brick Made of Sawdust.

Kissimmee, Fla., July 31—[Special].—The making of paving brick out of sawdust, which is claimed will revolutionize that industry, has been invented by J. Wade Tucker of this city and others helping him, after experimenting for years, and a company has been formed to manufacture it. A patent on the process is pending at Washington.

The brick is black in color, and resembles what might be a mixture of asphalt and tarby. It is almost noiseless, and its promoters claim that it can be manufactured cheaply, quickly, and will wear long.

The new brick is made from Florida cypress sawdust and hydroline, an asphalt composition under a pressure of from 50 to 100 tons. It weighs five pounds, which is about one-half as much as the ordinary paving brick. It is claimed that it can be manufactured much cheaper than any other brick for paving on the market, because it is manufactured from a waste by-product. Also that it is impervious to water, the attributes of cypress, "the wood eternal," entering into it; that it is easier to handle, there being no danger of breakage, besides being more noiseless than asphalt.

The new brick will be put on the market by the company in wholesale quantities. Machinery has been designed for the plant, and its promoters say that the paving industry of the country will soon be revolutionized or vastly modified. The new article will be known as cypress Wood-tex brick.

The block can be manufactured at different heats, so as to suit climatic conditions in various sections of the country. A point cited in its favor is that the Wood-tex brick is produced at a uniform heat, and each brick is equal to every other in this particular. There is likewise uniformity in its composition.

A complete roadway of the paving would be from three to four inches in thickness, according to which side is laid (either can be used), which is much thicker

than asphalt. Mr. Tucker, who has been a lumberman and mill manager for years, estimates that the ordinary mill will produce in sawdust alone enough to make 20,000 brick daily.

The advantage in the process is that it will be made from a by-product. The sawdust, according to Mr. Tucker, can be used without further preparation or the installation of any machinery. But in addition to this, machines can be used to grind up the useless timber for thousands more brick. This appears to have advantages in the utilization of what has for years been an almost absolute loss and dead waste to the lumberman engaged in the manufacture of cypress timber.

A corner of two of the main streets of the city has been laid with the new brick, which so far has shown no signs of wear whatever.

The company has applied for incorporation, with a capital stock of \$100,000 and a limited indebtedness of \$250,000. The principal stockholders are J. Wade Tucker, who is president of the company; E. L. Lesley, chairman county commissioners; C. A. Carson, president State Bank of Kissimmee, and W. A. McCool of Beaver Falls, Pa. The main offices will be located in this city. It is thought that construction work on a plant, probably to be located near that of the Everglades Company, will begin at an early date.

PEARCE H. GLASCOCK.

Maryland's Fine Road Building.

Maryland, which has been the only State on the motor route from Boston to Washington whose roads have provoked the wrath of the motorist, is working wonders with her highways, says a Washington letter in the Boston Transcript. It is now possible to go from Washington through Maryland to the Delaware line without a mile of bad roads. Where the ordinary motorist once would use up two days going from Washington to Atlantic City, he now can make the trip in one without breaking his springs. Maryland is building 1285 miles of State highways, all at the expense of the State, even to maintenance. These have cost more than \$10,000,000 already, and will have cost a total of \$18,000,000 when finished. In the neighborhood of Washington the profitable result of Maryland's liberal road building already is evident. The State is thronged with visiting automobilists, who are developing Maryland summer resorts and encouraging her hotels, while across the line from the District of Columbia for many miles homeseekers and capitalists are buying up thousands of acres of hitherto relatively idle farming lands. The huge sum appropriated by Maryland seems staggering for so small a State, but one need only perambulate the beautiful Maryland countrysides to see that the money is being returned to the State treasury in enhanced valuations even faster than it is being spent in road building.

Texas County Active in Road Building.

Freeport, Tex., August 7—[Special].—The good-roads movement is being forwarded actively in Brazoria county now. Actual work of hard-surface road construction is now going on in the Alvin district, in the northern portion of the county. A bond issue of \$225,000 has recently been floated for this improvement. For several weeks a large force has been working on the Velasco-Clute road district, which runs from Velasco and the mouth of the Brazos River to a point just south of Angleton. A bond issue of \$110,000 is being expended on this improvement, and road work of a very permanent character is being provided by the contractors. All bridges and culverts are being built with concrete abutments, drainage ditches and barrow pits are being provided in the lowland sections through which part of the road traverses, and the road will be crowned throughout with a heavy coat of gravel. Only a few miles of additional surfaced roads will be necessary to form a complete connection with the hard roads of both Harris and Galveston counties. The Brazoria road district, of which the town of Brazoria is the center, will on August 21 vote upon the issuance of \$150,000 good-roads bonds to build roads radiating from Brazoria in each direction and having one surfaced road built to connect with a Harris county improved road.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

LECTURES TO FARMERS.

Car Equipped With Stereopticon and Motion Picture Machine Will Tour.

In its endeavor to promote better farming methods, the introduction of pure-bred livestock and a closer relation between the farmers, bankers and business men along its lines, the Nashville, Chattanooga & St. Louis Railway Co. has recently constructed a demonstration and lecture car to be used by its industrial department in the furtherance of these ideas.

Recently this car made a tour through the Sequatchie Valley in Tennessee, where, during three days, over 2500 farmers and their wives and children were entertained with stereopticon views and lectures on farm topics, improved agricultural methods, better livestock, etc. Later it is proposed to put on the car a motion picture machine and show the farmers motion pictures of farm scenes along the road, illustrating what may be accomplished in this section and demonstrating the work carried on at the experiment and demonstration farms now operated by the company.

Under the direction of the industrial department the car will make a tour of the Shelbyville and Sparta branches August 11, 12 and 13, and lectures and demonstrations will be given at Shelbyville, McMinnville, Quebeck and Sparta. In this work the road has the hearty support and co-operation of the several agricultural and dairy experts from the University of Tennessee. There is a convenient auditorium arranged in the car where the farmers may gather for the lectures and to see the stereopticon. They may hear discussed matters of interest by men who are experts on the various matters which it is sought to impress upon the farmers. It is believed from the receptions accorded these speakers and by the genuine interest manifested by the farmers themselves that the efforts of the road to promote better farming methods throughout the territory served by it will be appreciated, and that much good will be accomplished.

Official Figures on Earnings.

The comparative statement of operations of the Nashville, Chattanooga & St. Louis Railway for June, and also for the 12 months ending June 30, shows a decrease in operating revenues, net revenues and operating income, despite the fact that operating expenses were considerably reduced.

For June, this year, as compared with June, 1914, the decrease in operating revenues was \$135,329.39; decrease in operating expenses, \$23,221.39; decrease in net operating revenues, \$112,108, and a decrease in operating income of \$104,372.78. The operating revenues for the month were \$837,323.94; operating expenses, \$664,618.97; net operating revenues, \$172,704.97; operating income, \$148,863.37.

For the fiscal year ending June 30 the operating revenues show a decrease of \$1,841,801.14 as compared with the previous year. Operating expenses were decreased \$979,817.48; net operating revenues showed a decrease of \$861,983.66, and operating income a decrease of \$853,759.44.

GOOD YEAR FOR ELECTRIC ROAD.

Hagerstown & Frederick Line Reports Gratifying Increase in Earnings.

The Hagerstown & Frederick Railway Co., Frederick, Md., has published a statement of results for its fiscal year which ended June 30, showing total operating revenues \$424,347.16, increase as compared with the next preceding year \$20,258.59; operating expenses \$255,373.35, decrease \$6537.98; operating income \$168,973.81, increase \$26,796.57; income other than operating \$9662.12, increase \$8095.92; gross income \$178,035.93, increase \$34,892.49; deductions from gross in-

come \$113,257.41, decrease \$14,422.82; net income \$65,378.52, increase \$49,315.31.

President Emory L. Coblenz in his remarks to the directors called attention to the fact that this was the first year of the company under the new management, that of Sanderson & Porter of New York, and said that splendid results were being obtained out of the power plant at Security, which justified the large investment made there. He also complimented the managers for the progress made, a great deal of which, he stated, was due to their knowledge and experience in solving the problems encountered. Furthermore, he said that the success of the company and the success of the communities which it serves are so interrelated that the management should give the very best service and the lowest rates possible, but the communities should likewise lend every assistance and aid in the development of the company's business, as they would thus be doing a service for themselves.

Alabama River Bridge Near Pine Hill.

The Alabama River bridge of the Gulf, Florida & Alabama Railway is situated near Pine Hill, Ala. It is a single-track structure, with one draw span 292 feet long and two approach spans of 146 feet each, one at each end of the crossing. All the spans are through-riveted trusses. The bridge is designed for Coopers E 60 loading under specifications of the American Railway Engineering Association. The draw is operated by a gasoline engine and also by hand. The weight of the steel structure is approximately 700 tons. The substructure consists of one pivot pier, two intermediate piers and a bank pier on each side of the river, all comprising about 4500 cubic yards of concrete masonry. The Eastern Construction Co., general contractor for the railroad, are building the substructure, while the American Bridge Co. is building the superstructure, the fabrication of which is proceeding at its Edgemoor and Peneoyd plants. G. A. Berry, Pensacola, Fla., is vice-president and general manager of the railroad, as well as its chief engineer.

Coal Notes.

Coal exported from Baltimore during July totaled 251,485 tons of bituminous, of which 95,960 tons went to Italy. In June the exports were 305,917 tons. Reports from Norfolk and Newport News show that 712,855 tons were exported from Hampton Roads in July, or 108,160 tons more than in June, this including 374,270 tons for Italy. The total exports from all Chesapeake Bay ports for July were 964,340 tons, or 53,728 tons more than in June. The total dumpings over the various piers on Hampton Roads during the month was 1,562,330 tons, or 125,000 tons more than in June.

Shipments of bituminous coal over the Western Maryland Railway during the first six months of the current year totaled 1,432,746 tons, an increase of 69,587 tons as compared with the corresponding period of last year.

Robert D. Reeves, assistant general freight agent of the Illinois Central Railroad and the Yazoo & Mississippi Valley Railroad at New Orleans, has, according to a report from there, been named as vice-president and general manager of W. G. Coyle & Co., coal shippers of that city handling the products of the De Bardeleben mines in Alabama.

\$1,000,000 MORE RAILS AND CARS.

Baltimore & Ohio Buys Total of \$3,500,000 of New Equipment--\$1,000,000 for Coal Pier.

The Baltimore & Ohio Railroad Co. announces that it has placed contracts with several steel mills for 17,000 tons of rails and with car manufacturers for 1000 steel hopper car bodies for immediate delivery. The material covered by the contracts will cost about \$1,000,000.

Practically all of the rails will be of the heavy type, weighing 100 pounds to the yard, and will be used for replacement on the company's Chicago line.

The new steel car bodies, which are of 100,000 pounds capacity, will be placed on trucks rebuilt at the com-

pany's own shops and for practical purposes are equivalent to new cars.

Announcement of these orders supplements contracts placed about July 15 for 2000 steel hopper cars and 50 passenger cars, costing approximately \$2,500,000, and which, with the present order, bring the total cost of the Baltimore & Ohio's recent equipment purchases up to \$3,500,000.

In this connection it is interesting to note that the company is preparing plans for the additional coal pier of great capacity which it proposes to build at Curtis Bay, Baltimore, and which will cost about \$1,000,000.

\$1,428,000 for Double-Tracking.

The Southern Railway has just awarded double-tracking contracts on its main line in North and South Carolina which amount to a total of \$1,428,000. The first of these, to cost about \$260,000, is let to H. H. Thrasher of Knoxville, Tenn., and is for six miles between Concord and Rocky River, in Cabarrus county, North Carolina; another is to the Cornell-Young Company of Greenville, S. C., for 17 miles from Hayne or Spartanburg Junction to Greer, S. C., and a third is to the Morrow Construction Co. of Atlanta for 13 miles from Greer to Greenville. The approximate cost of these last two contracts is \$1,168,000.

It will require four or five months to complete the first contract, while the other will require nearly two years. Other contracts are still to be awarded for other section of the main line. It is understood that there will be considerable steam shovel work on the contracts which have just been let.

New Equipment, Etc.

Nashville, Chattanooga & St. Louis Railway is building 200 box cars in its shops.

Virginia Iron, Coal & Coke Co. is reported in the market for 50 mine cars.

Gilchrist-Fordney Lumber Co., Laurel, Miss., is reported about to buy a light locomotive.

Southern Railway has ordered 4500 tons of rails from the Tennessee Coal, Iron & Railroad Co., Birmingham.

Richmond, Fredericksburg & Potomac Railroad has ordered 6 Pacific type locomotives from the Baldwin Locomotive Works, Philadelphia.

Atlantic Coast Line, according to a report from Philadelphia, has ordered 10 locomotives from the Baldwin Works of that city.

Pennsylvania Railroad has ordered the construction at its Altoona shops of 94 locomotives, of which 26 will be freight and 68 shifting engines.

El Paso & Southwestern Railway has ordered 2 combination observation and smoking cars from the Pullman Company, Chicago.

Maryland & Pennsylvania Railroad is testing on its line between Baltimore and Belair, Md., 22 miles, an electric car built by the Storage Battery Co. of New York, and may adopt electric or gasoline electric motive power for passenger service on that part of its road.

Mr. Candler a Railroad President.

Asa G. Candler of Atlanta, says a report from there, has been elected president of the Atlanta & St. Andrews Bay Railway, which runs from Dothan, Ala., to Panama City, Fla., 82 miles. He has been vice-president and a director for some time, and succeeds A. B. Steele, resigned. The road was chartered in 1906 and completed in 1908. A majority of the stock is owned by the Enterprise Lumber Co. The line was built by Mr. Steele and associates. Mr. Candler has just made an inspection trip over it, and some improvements may be made.

Contract Let for Coal Branch.

The Western Maryland Railway Co. has awarded the contract for the construction of the Fairmont-Helena Run Railway to A. L. Anderson & Bros. of Altoona, Pa., and work is to begin immediately. This line is

for the purpose of carrying out the product of new mines to be opened in the Helens Run region of West Virginia by the Consolidation Coal Co. It will be a little more than six miles long, and will run from Chiefton, on the Baltimore & Ohio Railroad, southward along Helens Run to the mines. The coal will be conveyed over the Baltimore & Ohio via Point Marion and Connellsville, Pa., to the Western Maryland main line at the latter point.

Industrial and Shippers' Guide Atlantic Coast Line.

For the purpose of encouraging closer relations between manufacturers and shippers and the merchants and receivers of freight located on the Atlantic Coast Line, this company has recently published a comprehensive Industrial and Shippers' Guide.

The guide describes in detail the agricultural, industrial and commercial resources of the various States through which the railroad passes in the South. The States are taken up individually, official maps of each are published and the resources of each described and illustrated.

Facts and statistics are given, showing the production of various agricultural crops, all of which give a comprehensive review of the Atlantic Coast Line territory. A general description of the cities and towns traversed is also included, this forming a ready reference for those seeking information about any city or town along the line.

There is a complete list of the banking institutions and a classified section showing the various industries and shippers on the Atlantic Coast Line listed under the heading of "Commodities Handled," which makes it a ready reference for many purposes.

Complete information is given about the services of the Atlantic Coast Line, the different stations on the main and branch roads, details of package car service and other general information that will be found helpful to shippers generally.

Copies of the book are being freely distributed from the office of the traffic department, Wilmington, N. C.

MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

Grading Work at Dallas Terminal.

Since September 21 of last year about 90 per cent. of the \$25,000 cubic yards of dirt filling for the tracks and yards of the Union Terminal Co.'s grounds at Dallas, Tex., has been completed. Equipment used by J. W.



WESTERN SPREADER.

Thompson of St. Louis, Mo., who has the contract, consists of thirty 16-yard Western air dump cars and twenty-five 30-yard all-steel Western air dump cars, one standard-gauge Western spreader car furnished by the Western Wheeled Scraper Co., Aurora, Ill.; one two-yard shovel manufactured by the Bucyrus Company, South Milwaukee, Wis.; one 2½-yard shovel manufac-

tured by the Marion Steam Shovel Co., Marion, O., and five railroad locomotives.

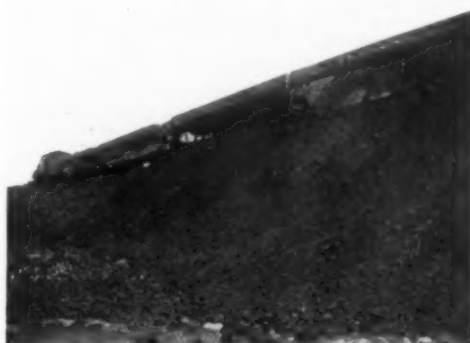
The dirt used in the embankment was secured by stripping 85 acres of land about two miles from the depot grounds to a depth of seven feet, temporary tracks being placed from the grounds to the pit. The thirty 16-yard Western dump cars were divided into two trains of 15 cars each and were loaded by the Marion shovel. The twenty-five 30-yard Western all-steel air dump cars were divided into two trains and were loaded by the Bucyrus shovel. This shovel and car equipment was



STEAM SHOVEL LOADING WESTERN CARS.

kept in continuous service, they having both night and day crews.

On the embankment made by the filling 20 miles of track will be laid, which includes the tracks for round-house, train sheds and connections for the different railroads. The Western standard-gauge spreader car was used for widening embankment and leveling the ground where the tracks are to be laid, one locomotive being kept in almost continuous service on the spreader car, which took care of all the spreading for the four trains.



WESTERN AIR DUMP CARS.

As soon as the filling is completed approximately 100,000 yards of gravel will be placed upon the embankment for the 20 miles of track. This gravel will be secured from under the place where the dirt has been stripped, as the dirt was underlaid with a fine quality of ballasting gravel. The 30-yard air dump cars will be used on this work, together with the spreader car.

Steel Piling Cut With Aid of Blow Pipe.

In the construction by the Florida East Coast Railway of a large drawbridge which spans the St. John's River at Jacksonville, Fla., steel sheet piling manufactured by the Lackawanna Steel Co., Lackawanna, N. Y., was used extensively to protect the piers. Each sheet or section consists of a three-eighths-inch web, being about 2¼ inches thick on the lock joint. After the piling is driven down it is cut off at the required length.

On this particular job approximately 800 feet of piling had to be cut off at a uniform height. An oxy-acetylene cutting and blow pipe was used, employing Prest-O-Lite gas and compressed oxygen, which is provided in portable cylinders furnished by the Prest-O-

Lite Company, Inc., 809 Speedway, Indianapolis, Ind.

At the lock joint practically four sections of metal had to be cut through, requiring frequent changes in the



PREST-O-LITE CUTTING AND BLOW PIPE.

adjustment of the blow pipe. Nevertheless, it is stated that between 40 and 50 linear feet of piling was cut in seven hours, one man handling the entire job. The cutting followed the piledrivers closely, so that virtually no time was lost.

State Operated Lime Plant.

Illustrating the interest that many States are taking in the advancement of agricultural industries is the recent establishment by the State of Virginia of a lime-grinding plant at Staunton. Commissioner G. W. Koener of the Virginia Agricultural Department has sent a circular-letter all over that State which is sufficiently explanatory, and is as follows:

"At a meeting of the Convict Lime Grinding Board I was directed, as secretary, to give public notice that the board is now ready to receive orders for ground limestone. The price for the present is fixed at 75 cents per ton f. o. b. Staunton, Va. Orders will be filled in the order received. Each order should be accompanied by a remittance in commercial form covering amount of stone ordered, and shipping instructions should be clearly stated. Orders can only be filled for carload lots, the minimum carload being 30 tons, but cars can be loaded to 40 tons if desired. Check should cover exact minimum or maximum carload. For the present the product will be shipped loose.

"The act provides that no one can order more than one carload until all orders on hand have been filled. All orders should be sent to W. W. Martin, secretary, Box 1475, Richmond, Va."

General contract for the erection of the plant was secured by the Smith-Courtney Company, manufacturer and jobber of supplies and machinery, Richmond, Va.,



VIRGINIA STATE LIME-CRUSHING PLANT.

in order to furnish the equipment. All the work, including the building of concrete foundations for and installation of machinery, was carried out by E. J. Andrews and A. P. O'Brien of Richmond, under the direct supervision of the Smith-Courtney Company.

The plant consists of a building of steel framework

with one large steel storage bin 200 tons capacity for the finished line and one steel bin of 150 tons capacity for crushed rock, these bins being constructed in the framework of the building.

Machinery installed includes a 200 horse-power slip-ring motor, manufactured by the General Electric Co., Schenectady, N. Y., for driving the main line shaft. From this shaft the power is transmitted by means of pulleys furnished by the Jeffrey Manufacturing Co., Columbus, O., which are fitted with clutches to the crusher for reducing the limestone to about 2½-inch size. The crushed limestone is then conveyed by a Jeffrey inclined continuous bucket elevator to the crushed-stone bin, then by gravity through automatic feeders to the Jeffrey swing hammer pulverizers, which reduce the stone to 20 mesh and smaller. From the pulverizer the product travels by vertical steel encased bucket elevators over Jeffrey vibrating screens to the storage bin as a finished line. Cars are loaded from the bin by means of chutes. The elevators and screens are driven separately by a 25 horse-power General Electric motor.

Smith-Courtney Company would be pleased to hear from anyone interested in lime-grinding, and can furnish complete outfit, as in this case, or can sell the necessary machinery. A large and complete stock of all materials necessary for equipping power plants, mills and factories, machine shops, garages and all necessary supplies as well as supplies and tools for railroads and contractors are carried by the company.

In addition to representing Jeffrey Manufacturing Co., Smith-Courtney Company is also the agent for Dodge Manufacturing Co., Mishawaka, Ind.; New York Leather Belting Co., Mechanical Rubber Co., New York; Lale & Towne Manufacturing Co., New York, and the Lunkenheimer Company of Cincinnati, O.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

NATIONAL ASSOCIATION OF COTTON MANUFACTURERS.

Semi-Annual Meeting in September.

The semi-annual meeting of the National Association of Cotton Manufacturers, being the ninety-ninth, will be held at Hotel Griswold, near New London, Conn., on Thursday, Friday and Saturday, September 9-11.

The opening session will be held in the ballroom of the hotel, beginning at 8.30 on Thursday evening, and will be limited to the address of President Albert Greene Duncan.

On Friday the morning session will be devoted to questions pertaining to the cotton fiber, at which it is expected that Dr. N. A. Cobb of Washington will continue his interesting address on the cotton fiber, illustrating by experiments some matters to which reference was made at the last meeting.

Friday evening there will be a banquet at 7 o'clock, after which there will be speeches by several prominent men.

Saturday morning will be another business session, and the papers to be presented at these business sessions will probably include the following subjects:

"Are the Textile Schools Doing All that Should Be Expected of Them?"

"Attitude of Massachusetts Toward Banking and Manufacturing."

"Ball Bearings for Cotton Mills."

"Cooling Ponds for Condensing Engines."

"Cotton Opening, Preparing and Picking."

"Future Production of Dyestuffs in This Country."

"Purchasing of Mill Supplies and Methods of Scheduling the Same."

"Starches Used in the Textile Industry."

"The Cotton Fiber."

"Use of Natural Dyestuffs in Cotton Manufacturing."

The adjacent territory is interesting to cotton manufacturers on account of the early spinning and weav-

ing of Sea Island cotton, which was brought from the Island of Barbadoes by John Winthrop, Jr., the first Governor of Connecticut.

When John Winthrop, Sr., was Governor of the Colony of Massachusetts Bay he encouraged the settlers to develop water-powers in each of the settlements, where mills were built by John Elderkin of Lynn, who was the millwright of Massachusetts Bay Colony. This mill, built in 1651 at the head of Mill street, New London, is owned by the city and is still in use, being the only one of these early mills which still remains standing.

For a Silk Industry.

Plans are contemplated for establishing a silk industry in Brooks county, Georgia. Dispatches from Quitman state that E. Y. Clarke, secretary of the executive committee of the Quitman Industrial Club, is interested in organizing a company to plant mulberry trees, cultivate silkworms, establish mills, etc. Discussing the proposition, Secretary Clarke has stated:

"The decision to enter into the silk industry in Brooks county has come not as a new proposition. Several of the citizens of the county have for many months been carefully studying the situation and trying to find some new industry which offered to the county both added fame and wealth. After carefully studying the matter in connection with and through the assistance of officials of the Georgia Chamber of Commerce, Atlanta, and other leading citizens of the State, some of the best of the citizens of the county have decided that this field offers more to the county than any other, and unless 'all plans fail' the county of Brooks will in the near future be known not only as the 'hog-and-hominy' county of the State, but as the 'hog, hominy and silk' county, its citizens having grown so rich on raising hogs and diversified farming as to have had their attention so strongly turned toward the most expensive clothing in the world, namely, silk, and reached the determination that inasmuch as no one else in America is raising silk, and that \$200,000,000 is going across the waters each year for this product, that Brooks county needs and can use and must have part of this \$200,000,000."

Textile Notes.

Humboldt (Tenn.) Cotton Mills has increased capital stock from \$100,000 to \$200,000.

Neville Bullitt, Keller Building, Louisville, Ky., plans to establish a knitting mill.

C. C. Bagby, Nelson D. Rodes and associates, Danville, Ky., plan to establish knitting mill.

Broad River Mills, Blacksburg, S. C., contemplate increasing capital and adding 10,000 spindles.

Royall Mills, Charleston, S. C., plans to add 100 machines to increase capacity for manufacturing seamless bags.

Robinson Manufacturing Co., Charlotte, N. C., will add 4000 spindles and has awarded the machinery contract to J. H. Mayes of Charlotte.

Maysville (Ky.) Mills, lately mentioned as to erect addition, reconstruct dyehouse, etc., has let building contract to Harding & Simonds of Maysville.

Avondale Mills, Birmingham, is replacing old machinery with the spinning and cardroom equipment mentioned last week. The cost is about \$125,000, and all contracts have been awarded.

Fulton Cotton Mills, Athens, Ala., will add two Whitin spinning frames for coarse numbers, one intermediate frame and two Lowell camless winders. The company has ordered this new machinery. It recently installed a 110-spindle Foster winder.

Coneross Yarn Mill, Anderson, S. C., will change and add to its machinery so as to manufacture asbestos yarns. This product is said to be in demand for wrapping cannon because of the intense heat generated by rapid fire.

Edenton Mills to Build Addition.

A \$120,000 addition will be built by the Edenton (N. C.) Cotton Mills. The building will be of brick mill construction, costing \$20,000, and will be equipped with 10,000 spindles, 500 horse-power electric-drive equipment, etc., costing \$100,000. Plans are in a preliminary stage.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

Machinery for Sulphuric Acid and Superphosphate Wanted.

American Pulverizing Co., East St. Louis, Ill.:

"We have a letter from Thomas W. Deakes, P. O. Box 226, Auckland, New Zealand. We are enclosing copy of letter, from which we will thank you to select Mr. Deakes' requirements, that manufacturers who specialize in machinery for sulphuric acid and superphosphate plants, and which may embrace our American ring pulverizer, may communicate with him. We believe your publication affords the best channel through which to expose his requirements to United States manufacturers."

Mr. Deakes' letter is, in part, as follows:

"A company to manufacture artificial manures and acid is being formed with £250,000 capital. I will be managing director. The consulting engineer is S. Irwin Crookes, strongly advocating a plant manufactured by Fraser & Co., London. If you can give this information to manufacturers that specialize in complete acid and superphosphate plants that embrace your pulverizing machinery and they can cable me before September 30 or mail me an approximate quote for plant capable of manufacturing 60,000 tons of superphosphate and 20,000 tons of sulphuric acid annually it will have the earnest consideration of the directors."

Sack Manufacturing Machinery.

Rafael Quintero Paoli, Estudiante de Derecho, Gampeche, Mexico:

"Send me addresses of manufacturers of machinery to make sacks, bushel or larger size, using our sisal hemp (binder twine), which is cultivated and produced in this peninsula."

Bells, Wrenches, Pliers, Etc.

Albert Harman Company, 26 Hamilton road, Highbury, London, England:

"We are open to buy large quantities of cycle motor wrenches, pliers, cycle bells and lamps, etc. Also like to accept agencies for U. S. A. hardware if suitable lines are offered."

Steel Desks and Chairs.

M. de Cardenas & Co., P. O. Box 893, Havana, Cuba:

"If you know of any good manufacturer of steel school desks and opera chairs, kindly have them communicate with us, sending catalogues, prices, discounts and terms."

Turned Wood Articles.

Herbert Davies & Co., 68 and 70 Finsbury Pavement, London, E. C., England:

"If you hear or know of any responsible manufacturing company of turned wood goods, especially of articles for domestic use, who are desirous of being represented in this country, we shall be pleased to enter into correspondence with them."

Moving-Picture Films.

A. Moscini, via Da Giussano, No. 23, Milan, Italy:

"Find for me an American firm who will manufacture moving-picture films in rolls of any size for moving picture taking. I have a large request for this kind of celluloid films. Pass my request to some important manufacturers and let me have samples and quotations."

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ala., Pine Hill.—Gulf, Florida & Alabama Ry., G. A. Berry, V.-P. and Gen. Mgr., Pensacola, Fla., proceeding with construction previously-noted bridge across Alabama River in Wilcox county; single-track structure; 1 draw span 292 ft. long, with 146-ft. approach spans at both ends; all spans through-riveted trusses; bridge designed for Coopers E60 loading under specifications of American Railway Engineering Assn.; draw span operated by gasoline engine power, also by hand; weight of steel structure about 700 tons; substructure includes pivot and 2 intermediate piers in river, with bank pier on either side, and comprises about 4500 yds. concrete masonry; substructure being built by general contractors for railroad; American Bridge Co., 30 Church St., New York, Contr. for superstructure. (Lately mentioned under Monroeville.)

Fla., Miami.—City votes Sept. 21 on \$75,000 to construct bridge over Miami River at Ave. D, and \$25,000 to construct bridge over Miami River at Ave. G; B. H. Klyce, City Engr. (See Miscellaneous Construction.)

Ga., Dalton.—Whitfield county will construct steel and concrete bridge over Coahulla Creek. Address County Commrs.

Ga., Rome.—Floyd county will construct bridges across Dozier, Zuber and Woodward creeks on Calhoun Rd. and Beach Creek on Alabama Rd. Address County Commrs.

Ky., Jamestown.—Russell county votes Aug. 21 on \$40,000 bonds to construct bridges and roads. Address County Commrs.

Ky., Lexington.—City Commrs. approved plans and specifications for 5 approaches to Jefferson St. and W. Main St. viaducts submitted by W. H. Courtenay, Ch. Engr. Louisville & Nashville R. R., improvements to include asphalt paving, concrete sidewalks and concrete handrails; estimated cost, \$12,000.

Ky., Lexington.—Fayette county votes Sept. 30 on \$300,000 bonds to pay county's share of cost of bridge to be built across Kentucky River and construct roads. Address County Commrs. (See Road and Street Work.)

La., Lake Charles.—Calcasieu Parish Police Jury let contract Vincennes Bridge Co. of Vincennes, Ind., at \$5679 to construct bridge

across Chouinque Bayou, 8 mi. south of Sulphur, La.

N. C., Dobson.—Surry County Commrs. will erect 10 bridges; steel with concrete masonry; plans ready within two weeks; John Ambler, Engr., Winston-Salem, N. C.

N. C., Hyde County.—Mattamuskeet Drainage Dist. Commrs. will construct single-leaf plate-girder highway Scherzer rolling-lift bridge across outfall canal; 40-ft.-clear opening; bids received until Aug. 28 by Lawrence Brett, Engr. Board Drainage Commrs., at his office, Wilson, N. C. (See Machinery Wanted—Bridge Construction.)

N. C., Wilmington.—City let contract W. N. Royal of Rocky Mount, N. C., at \$2799.60 to construct about 3 blocks of culvert on Macomber's Ditch.

Okla., Lawton.—Comanche county will expend \$15,000 to construct lately-noted small concrete and steel bridges; S. A. Joyner, Engr. (See Road and Street Work.)

Tenn., McMinnville.—Nashville, Chattanooga & St. Louis Ry., H. McDonald, Ch. Engr., Nashville, is reported to construct bridge; 100 ft. long; 60-ft. steel girder, with concrete foundations and reinforced concrete approaches; 4-ft. sidewalks on each side.

Tex., Dallas.—Northern Texas Traction Co. (Stone & Webster Engineering Corp., Engr., 147 Milk St., Boston, Mass., and Commonwealth Bldg., Dallas) has plans and specifications for street-car viaduct between Dallas and Oak Cliff; concrete and steel; estimated cost \$500,000.

Tex., Denison.—City contemplates voting on \$50,000 bonds to build Coleman viaduct. Address The Mayor.

Tex., Victoria.—City, J. H. Flemings, Mayor, will issue \$30,000 bonds for proposed bridge and street improvements. (See Road and Street Work.)

Tex., Weatherford.—Parker county defeated \$80,000 bonds to construct bridges, roads, etc. (Lately noted.)

Va., Portsmouth.—Norfolk County Com. on Roads and Bridges decided to construct wooden bridge over Tanners Creek, to cost about \$30,000. (Lately noted to build concrete bridge costing \$80,000.)

Va., Richmond.—City will repair Main St. arch of Shoccoe Creek; damaged by flood; estimated cost \$11,000; Chas. E. Bolling, City Engr.

Vn., Stuart.—Patrick county will construct steel bridge 89 ft. long over Dan River, 6 mi. from Meadowfield, and 1164 cu. yds. approach fill; bids until Aug. 20; G. P. Coleman, State Highway Commr., Richmond. (See Machinery Wanted—Bridge Construction.)

CANNING AND PACKING PLANTS

Fla., Olga.—S. P. Bruton let contract L. R. Skinner Mfg. Co. to install machinery in packing plant; building complete.

Fla., Okeechobee.—Chesapeake & Gulf Fisheries Co. of Kansas City, Mo., let contract R. E. Steel to build fish-packing plant; 40x50 ft.; 2 stories. (See Misc. Entprs.)

La., Gueydan.—Robt. J. Boudreau of Erath, La., is interested in establishment of canery.

Okla., Muskogee.—Muskogee Fruit Growers' Canning Co., 215 S. Cherokee St. (lately noted inceptd., capital \$5000), organized; O. P. M. Butler, Pres.; Dr. D. M. Randel, V.-P.; R. V. Anderson, Secy.; Mr. Lowery, Treas.; Ralph Everett and Mr. Rashosky, Mgrs.; rented building and installed machinery; present daily capacity 40,000 cans; may enlarge plant next year.

Tenn., Bristol.—Gauthier Abattoir Co. has reorganized with increased capital; continue ice and cold-storage plant and abattoir; add facilities for canning meats; build smokehouse and other structures; install equipment to convert waste into fertilizer.

Tenn., Bristol.—Gauthier Abattoir Co. re-organized; will erect buildings, including smokehouse, and install machinery, including equipment to convert waste into fertilizer; will also operate abattoir and cold-storage plant.

CLAYWORKING PLANTS

Ark., Helena.—Bricks.—Helena Ornamental & Press Brick Co., capital \$10,000, inceptd. by W. V. Deering, W. F. Castle and Catherine Deering.

CONCRETE AND CEMENT PLANTS

Ky., Newport.—Concrete Flooring.—Concrete Flooring Co., capital \$50,000, inceptd. by Fred A. Dole, Fred C. Evers, Gus Sauer and Henry Schroeder.

COTTON COMPRESSES AND GINS

Ark., Cotton Plant.—Farmers' Gin Co. (lately noted inceptd., capital \$5000) organized; J. M. McGowan, Pres.; Edw. Rolson, Forrest City, Ark., V.-P.; J. R. Meehan, Secy.-Treas.; let contract for remodeling of purchased plant; 3 70-saw gin.

Ark., Mansfield.—Mansfield Cotton Oil Co., capital \$30,000, inceptd. by W. C. Hathaway, J. F. Rumsey and T. P. Edwards.

Ga., Sparta.—Rozier & Baker let contract to H. A. Foster, Sparta, to erect lately-noted plant; 36x30-ft. ginnery and 50x75-ft. seedhouse; concrete floors; galvanized corrugated-iron roof, sides and ends; machinery contracts let; capacity 100 bales daily; land, buildings and machinery to cost \$10,000.

Tenn., Memphis.—Edmondson Gin Co., capital \$5000, inceptd. by J. C. Rainey, Hugh Connell, E. T. Lindsey and others.

Tex., Memphis.—Simmons Gin Co., capital \$5000, inceptd. by J. W. Simmons, S. L. Seago and T. B. Simmons.

Tex., Paint Rock.—Western Gin Co., Ballinger, Tex. (lately noted to build gin), has completed \$1800 fireproof building; contractor, Barks & Barstow Mfg. Co., Dallas, Tex.; install five 70-saw huller gins; machinery purchased.

Tex., Spur.—Citizens' Gin & Power Co., capital \$10,000, inceptd. by E. Luce, C. D. Copeland and E. B. Johnson.

Tex., Waco.—W. T. Thorne, R. F. D. No. 7, will rebuild cotton gin lately noted burned; erect galvanized-iron 18x100-ft. building; construction by owner; install equipment.

COTTONSEED-OIL MILLS

Ga., Atlanta.—Bryson Cotton Oil Co., capital \$10,000, inceptd. by C. J. Murphy, Hughes Spalding and others.

Ga., Atlanta.—Staple Cotton Oil Co., capital \$100,000, inceptd. by J. M. Volger, Dan McDougald and others.

Ga., Atlanta.—Wells Cotton Oil Co., capital

\$10,000, inceptd. by O. J. Milliken, F. W. McKee and H. A. Newman.

Ga., Atlanta.—Kelly Cotton Oil Co., capital \$10,000, inceptd. by F. W. McKee, C. J. Murphy and J. M. Volger.

Ga., Atlanta.—Home Cotton Oil Co., capital \$10,000, inceptd. by W. T. Street, O. J. Milliken and others.

N. C., Scotland Neck.—W. E. Smith and others acquired Cotton Oil & Ginning Co.; plan to erect brick mill and otherwise improve plant.

Tex., Spur.—Spur Oil Mill Co., capital \$10,000, inceptd. by E. Luce, E. B. Johnson and C. D. Copeland.

DRAINAGE SYSTEMS

Ark., Crawfordville.—Crittenden County Drainage Dist. No. 2, L. S. Swepston, Secy., will construct 37 ditches; about 5,022,000 cu. yds. earth; mainly floating dredge work; bids Aug. 23; W. H. Newsom, Engr., Wynne, Ark. (See Machinery Wanted.)

Fla., Lake Worth.—Lake Worth Drainage Dist. will have surveys made under supervision of Orrin Randolph, Ch. Engr. of Dist., for drainage system to reclaim about 130,000 acres. (Lately noted.)

Fla., Pinellas Park.—Pinellas Park Drainage Dist., Frank D. Butler, Gen. Agt., Florida Association, Northern office, 1914 Cherry St., Philadelphia, is proceeding with previously and lately-noted drainage; supervisors are D. D. Stine, Jas. R. Shocraft and P. J. McDevitt; Ch. Engr., C. M. Dechant; Contrs., J. W. Campbell and A. B. Hull, Jr.; Mr. Campbell in charge, with headquarters at Pinellas Park; about 12,000 acres to be drained; cost \$30,000 to \$100,000; includes 15-mi. channel dredged from Boca Ceiga Bay to connect with 7-mi. navigable canal dug 3 to 4 ft. below low tide, 30 to 60 ft. wide, with 3 or 4 yacht harbors; 9 mi. ditches 15 to 20 ft. wide; 37-mi. ditches 2 to 8 ft. wide, and 47-mi. sloped road ditches, the material from slope to be thrown on roadway after road has been cleared, this making a road every half mile, north and south and east and west through entire district.

N. C., Goldsboro.—Nahunta Swamp Drainage Dist. (W. W. Peirce and others) will construct drainage system to reclaim about 7000 acres; issued \$30,000 bonds.

N. C., LaGrange.—Moseley's Marsh Drainage Dist., W. P. Hardy, Secy., will construct 4-mi. canal; about 56,000 cu. yds.; bids Aug. 16. (See Machinery Wanted—Drainage.)

S. C., Anderson.—Comrs. Rocky River Drainage Dist. No. 1, Z. C. Ballentine, Pres., will issue \$19,500 bonds for improvements; district contains 800 acres land.

Tex., Bay City.—Matagorda County Commrs.' Court engaged E. N. Gustafson, Engr., to make preliminary survey for drainage system; district comprises about 10,000 acres surrounding Buckeye.

Tex., Raywood.—Raywood Drainage Dist. contemplates draining 35,000 acres; cost \$70,000. Address Drainage Commrs. (Previously noted.)

ELECTRIC PLANTS

Ala., Hartselle.—Alabama Power Co., F. H. Chamberlain, Gen. Mgr., Birmingham, purchased Hartselle Light & Power Co.'s plant; will operate at present with machinery already in use, but later proposes to construct transmission line through Hartselle conveying power from Muscle Shoals.

Ala., Jacksonville.—Jacksonville Light & Power Co., capital \$10,000, inceptd. by Thos. W. Martin, Pres.; W. R. Loyd, V.-P.; Wiley Alford, Secy.-Treas.; all of Birmingham.

Ala., Russellville.—Sloss-Sheffield Steel & Iron Co., Birmingham, will build central power station; install 2 turbo-generators of 300 K. W. each, etc.; power-house of brick and concrete construction with metal sash, windows and doors. (See Mining.)

Fla., Daytona.—Daytona Electric Light & Power Co. capital \$500,000, inceptd.; Michael Sholtz, Pres.; Jas. K. Atkinson, V.-P. and Treas.; David Sholtz, Secy.

Fla., Salerno.—B. W. Mulford and others are reported to incorporate company with \$200,000 capital to construct electric-light plant, water-works, etc.

Fla., Titusville.—City votes Sept. 20 on \$35,000 bonds to purchase Titusville Electric Light Co.; L. W. Doolittle, Mayor.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Ky., Lancaster.—City contemplates constructing electric plant to cost about \$15,000. Address The Mayor.

N. C., Apex.—City granted franchise Municipal Service Corp. to construct and operate electric-light plant, water-works and sewer system.

N. C., Dunn.—City let contract to Comstock Electric Co., High Point and Thomasville, N. C., to install electric-power plant and line equipment. (Lately noted.)

N. C., Lumberton.—City, A. E. White, Mayor, contemplates expending \$25,000 for electric-light plant and water-works improvements; Gilbert C. White, Consult. Engr., Charlotte, N. C.

Okl., Kusa (not a P. O.).—Kusa Water & Light Co. inceptd. by Jno. F. Goshorn of Dewar, Okla., and others. (See Water-works.)

S. C., McBee.—McBee Electric Co., capital \$10,000, inceptd. by J. D. Sexton, W. L. McCoy and Mrs. Sallie McCoy.

Tex., Devine.—Devine Light, Power & Ice Co., capital \$35,000, inceptd. by A. Naval, L. F. Price and J. W. Fullerton.

Tex., Spur.—Citizens' Gas & Power Co. inceptd. by E. Luce and others. (See Cotton Compresses and Gins.)

Tex., Victoria.—City, J. H. Flemings, Mayor, will issue \$40,000 bonds (previously noted) for electric-light-plant construction.

Va., Hopewell.—Hopewell Electric Light & Power Co., capital \$50,000, inceptd. by W. H. Hoyt, Prest.; H. J. Ingram, Jr., V.-P.; C. T. Morris, Secy.-Treas.

Va., Winchester.—City is considering municipal ownership of electric-light system; Julian F. Ward, Mayor.

W. Va., Parkersburg.—Kanawha Traction & Electric Co., J. N. Camden, Prest., proceeding with construction of steam-electric plant, previously reported to cost \$500,000; station building 90x140 ft., 70 ft. high; concrete foundations; brick and steel superstructure; concrete and felt roof; construction by the company, under supervision A. C. Polk, representative Engrs., Sanderson & Porter, 52 William St., New York; initial installment includes 4 500-H. P. B. & W. boilers, with Detroit stokers, and 6250 K. V. A. General Electric turbo-generators, with Allgeier condensers; switchboard and minor electric equipment supplied by General Electric Co., Schenectady, N. Y.; completion of plant probably by Jan. 1.

W. Va., Philippi.—City voted \$20,000 light, paving and sewer bonds. Address The Mayor.

FERTILIZER FACTORIES

Md., Baltimore.—G. Ober & Sons Co., U. S. Fidelity & Guaranty Bldg., will enlarge fertilizer factory at foot Hull St., Locust Point; renovate present plant; additional building 180x330 ft.; structural steel frame; sillings and roof asbestos-covered metal; part of material and equipment bought; construction largely by company's force under supervision; let contract for structural steel to Pittsburgh (Pa.) Bridge & Iron Co.; total cost about \$100,000; E. C. Miller, Consult. Engr., 525 W. 27th St., Baltimore.

Md., Baltimore.—G. Ober & Sons Co., U. S. Fidelity & Guaranty Bldg., will enlarge fertilizer factory at foot Hull St., Locust Point; no details obtainable.

N. C., Hot Springs.—Bugue Lime Co. (American Agricultural Chemical Co.) let contract Huger Bros. of Montgomery, Ala., to install lime-crushing plant; cost \$25,000.

Tenn., Bristol.—Gauthier Abattoir Co. will install equipment to convert waste into fertilizer. (See Canning and Packing Plants.)

FLOUR, FEED AND MEAL MILLS

Ark., Mena.—T. A. Allen and W. C. Cocking will establish mill with daily capacity 25 bbls. flour.

Fla., Bonifay.—Bonifay Milling Co., capital \$10,000, inceptd. by W. C. Alford, Prest.; A. J. Miller, V.-P.; C. A. Prim, Secy.-Treas.

Ga., Cleola.—J. H. Milner will establish 40-bbl. flour mill; ordered machinery from Sprout, Waldron & Co. of Muncy, Pa., through W. C. Edwards of Macon, Ga., Southern representative.

Mo., Kansas City.—Kansas City Mill & Elevator Co., capital \$5000, inceptd. by F. H. Lebrock, Thos. H. Johnston and Hugh Hughtest.

Mo., St. Louis.—Des Peres Milling Co., capital \$20,000, inceptd. by Wm. T. Bledsoe, Jos. Ismert, Geo. D. Reichert and Laurel W. McMorrow.

N. C., Albemarle.—H. L. Souder, Albemarle R. F. D. No. 3, will establish roller-flour

mill; daily capacity 75 to 100 bbls.; erect mill construction building; contract not let. (See Machinery Wanted—Engine and Boiler.)

N. C., Ether.—Ether Roller Mills, capital \$20,000, inceptd. by W. Farlow, Prest.; T. H. Wood, V.-P.; Eli P. Freeman, Secy., Treas. and Mgr.; has let contract for erection of 30x50x24-ft. \$1000 ordinary-construction building; will install machinery for daily capacity 20 bbls. flour, 100 bus. meal and 100 feed. (See Mch. Wntd.—Flour and Feed Mch.)

Okl., Lawton.—Walker Flour Mills Co., capital \$25,000, inceptd. by P. M. Clark of Lawton, Alex. Walker and Carrie Walker, both of Lancaster, Ky.

S. C., Greenville.—Victor Flour Mills, capital \$100,000, inceptd. by T. Frank Hunt and H. L. Todd; will build flour mill.

Tex., Denison.—Steger Milling Co. of Bonham, Tex., purchased Denison Mill & Grain Co.'s plant; contemplates improvements to present mill and erection of new plant.

Va., Old Rock Mill (not a P. O.).—G. W. Kernodle, 1409 Kennedy St., Washington, D. C., will develop water power and install custom-roller mill on Potomac River; will erect building; contract not let.

FOUNDRY AND MACHINE PLANTS

Fla., Bartow.—Vegetable and Fruit Machines.—Lightning Safety Vegetable & Fruit Machine Co., capital \$40,000, inceptd. by J. J. Boynton, Prest.; J. R. Spencer, V.-P.; J. L. Ross, Secy.; R. B. Huffaker, Treas.

Okl., Oklahoma City.—Gas Plants.—Simplex Gas Plants Co., capital stock \$125,000, inceptd. by J. S. Wakefield, Oklahoma City, and L. J. Halliburton and O. G. Halliburton, Dallas, Tex.

Okl., Tulsa.—Engines, etc.—Chas. B. Parker and others contemplate building foundry to manufacture engines, hay balers, building ventilator, etc.; will organize Tulsa Engine & Foundry Co. with \$50,000 capital.

Tex., Graham.—Road Grader.—Dr. W. H. Logan is promoting organization of company to manufacture grader.

GAS AND OIL ENTERPRISES

Ark., Pine Bluff.—Arkla Oil Co., capital \$35,000, inceptd. by W. J. Miller, Prest.; H. E. Trowbridge, V.-P.; W. J. Homer, Secy.; H. H. Gee, Treas.

La., Alexandria.—Oil Refinery and Natural-gas Supply.—Federal Oil & Refining Co. will build lately described refinery; also contemplates supplying natural gas to the city; build 72 mi. pipe line; 4-in. to 6-in. pipe; R. G. Allison, Engr., Shreveport, La. (Recent mention included organization, capital \$150,000; W. W. Whittington of Alexandria, Prest.)

La., Shreveport.—Spanish Lake Oil & Gas Co., capital \$60,000, inceptd. by W. C. Marshall, Prest.; J. H. King, V.-P.; W. W. Newcomb, Secy.; C. O. Ferguson, Treas.

Okl., Jennings.—Oil Refinery.—Mid-Continent Refining Co., Tulsa, Okla., is reported to build oil refinery.

Okl., Kingston.—Whitewright Oil & Gas Co., capital \$20,000, inceptd. by Bruce May of Kingston, T. H. Lively and G. D. McCarty of Whitewright, Tex.

Okl., Tulsa.—General Petroleum Co., capital \$25,000, inceptd. by Jas. A. Veasey, Maude Sullivan and Marguerite Lay.

Okl., Tulsa.—U. S. Drilling Co., capital stock \$2500, inceptd. by F. R. Ufer, Kansas City, and J. W. Scott and C. F. Robertson.

Okl., Tulsa.—S. C. Lawson Oil Co., capital stock \$5000, inceptd. by S. C. Lawson, A. E. Lewis and Ray S. Fellows.

Tex., Calvert.—Calvert-Kosse Oil & Gas Co., capital \$20,000, inceptd. by F. S. White, Frank Martin and Bethel Dougan.

Tex., Houston.—Texas Petroleum Co., capital \$20,000, inceptd. by John Lovejoy, John Lovejoy, Jr., and Rachel Malevinsky.

Tex., McKinney.—Fitzhugh Oil & Gas Co., capital \$10,000, inceptd. by John H. Ferguson, Prest.; J. D. McKinney, V.-P.; Geo. Keller, Secy.; Henry W. Warden, Treas.

Tex., Petrolia.—Oil Refinery.—Developers' Oil Co. will build oil refinery with daily capacity of 1000 bbls.; cost \$25,000.

Tex., Sour Lake.—Crescent Oil Co., capital stock \$520, inceptd. by D. A. Meehan, B. T. Denney, G. T. Bradshaw and others.

Tex., Sour Lake.—Developers' Oil Co., capital \$5000, inceptd. by Hubert Holt, T. O. Massey and John D. McCall.

Tex., Taylor.—First Jourdan Oil Co., capital \$8000, inceptd. by Fritz Fuchs, A. J. Krause and Will Fuchs.

Tex., Taylor.—First Floresville Oil Co., capital \$6000, inceptd. by Fritz Fuchs, John Scherelver and Will Fuchs.

W. Va., Kingwood.—Indian Rock Oil & Gas Co., capital \$32,000, inceptd. by J. T. Dailey, Prest.; H. F. Hartman, V.-P.; H. H. White, Secy.-Treas.

ICE AND COLD-STORAGE PLANTS

Fla., Okeechobee.—Okeechobee Ice Co., capital \$25,000, inceptd. by C. I. Day, Prest.; W. B. Crawford, V.-P.; H. R. Rosebro, Secy.-Treas.

Ga., Lyons.—Company (name not decided), Alton B. Cowart, Mgr., will install lately-noted ice plant; 10 tons capacity; erect \$2000 ordinary-construction building. (See Machinery Wanted—Ice Machinery.)

Ga., Rome.—Rome Ice & Coal Co., capital \$35,000, organized to build ice plant.

N. C., Greenville.—Greenville Cotton Mills contemplates installing 5-ton ice plant. (See Machinery Wanted—Ice Machinery.)

Tex., Devine.—Devine Light, Power & Ice Co., capital \$35,000, inceptd. by A. Naval and others. (See Electric Plants.)

IRON AND STEEL PLANTS

Ala., North Birmingham.—Iron Furnace.—Sloss-Sheffield Steel & Iron Co., Birmingham, has plans under way for improvements to North Birmingham furnace; has made no appropriation as yet. (Lately incorrectly noted.)

IRRIGATION SYSTEMS

Tex., Pecos.—Reeves County Irrigation Dist. No. 1 voted bonds to construct irrigation system; district comprises about 21 mi. of Upper Toyah Valley; W. W. Stewart and others, directors. (Noted in March.)

LAND DEVELOPMENTS

Fla., Upchurch.—Seminole Avocado Development Co., capital \$6000, inceptd. by C. A. Sercomb, Prest.; W. P. Seaford, V.-P.; H. M. Sullivan, Secy.-Treas.

Ga., Savannah.—Seaboard Corp., capital \$15,000, chartered by W. M. Coney of Savannah, L. M. Williams of Richmond, Va., and V. K. Wright of Norfolk, Va.

La., Shreveport.—Commercial Land Co., capital \$50,000, inceptd. by E. R. Bernstein, Prest.; Michael Bernstein, V.-P.; W. A. Mabry, Secy.-Treas.

Md., Baltimore.—Rockaway Beach Realty Co. inceptd. with \$50,000 capital stock to develop as residential subdivision 152-acre tract on Turkey Point; Vincent L. O'Connor, Foster Ave. and 5th St., and others, incorporators.

N. C., Charlotte.—Oak Lawn Cemetery, W. C. Dowd, Prest., Selwyn Hotel Bldg., engaged McCrady Bros. & Cheves, Engrs., Charleston, S. C., to prepare plans and specifications for cemetery; will soon let first contract, aggregating \$25,000. (Lately noted.)

Okl., Claremore.—City, J. Ryan, Mayor, voted \$15,000 for parks and fair grounds.

Okl., Okmulgee.—City voted \$100,000 park lands. Address The Mayor.

S. C., Union.—City engaged McCrady Bros. & Cheves, Engrs., Charleston, S. C., to prepare plans for municipal park, including swimming pool, baseball and play grounds.

Tenn., Nashville.—Southern Home & Immigration Co., capital \$20,000, inceptd. by Will M. Smartt, Harry Ezell, M. Wight Hicker and others.

LUMBER MANUFACTURING

Ark., Burton (not a P. O.).—Joe Meyers, Blytheville, Ark., will open bids in 30 days to erect 400 building for lately-noted sawmill; capacity 5000 to 8000 ft. lumber daily; machinery previously noted purchased.

Ala., Silas.—S. H. Bollinger & Co. of Shreveport, La., will build lumber plant, including sawmill, planers, drykilns, etc.; Alabama, Tennessee & Northern Ry. will install 1500-ft. siding; daily capacity of sawmill 65,000 to 70,000 ft.; estimated cost of plant \$75,000.

Miss., Crystal Springs.—Rhymes Lumber Co., capital \$10,000, inceptd.

N. C., Asheville.—Curry Bros., lately noted purchasing 6000 acres timber near Asheville, will establish mill near Stackhouse. (See N. C., Stackhouse.)

N. C., Polkton.—Polkton Lumber Co., Wadesboro, N. C. (lately noted inceptd., capital \$10,000), organized; Alex. B. Clark, Prest.; F. B. McCracken, Newark, N. J., V.-P.; Walter M. Miller, Statesville, N. C., Secy.; W. Fletcher Miller, Treas. and Mgr.; will erect mill and sheds; construction by company; manufacture pine roofers; daily capacity 30,000 ft. (See Machinery Wanted—

Planing Machine; Trimmer; Boiler; Engine.)

N. C., Stackhouse.—Curry Bros. Lumber Co., Ridgway, Pa. (for the present), will establish sawmill; erect ordinary single-band sawmill building; install machinery, cost about \$30,000, to manufacture white pine, hemlock and hard woods; capacity about 50,000 ft. daily. (See Mch. Wntd.—Sawmill (Band).)

Okl., Hartshorne.—A. R. Mitchell Lumber Co., capital \$5000, inceptd. by Alfred R. Mitchell and May A. Mitchell of Hartshorne and Sam W. Mitchell of Alderson, Okla.

Okl., Kusa (not a P. O.).—Kusa Lumber & Supply Co., capital \$10,000, inceptd. by Jno. F. Goshorn of Dewar, Okla.; Geo. E. Nicholson of Kansas City, Mo., and Frank C. Nicholson of Iola, Kans.

S. C., Charleston.—Atlantic Timber Co., capital \$20,000, inceptd. by F. G. Macnead and J. F. Brenner.

Tenn., Memphis.—L. D. Murrelle Lumber Co., capital \$10,000, inceptd. by L. D. Murrelle, John A. Schultz, W. C. Balch and others.

Tex., Houston.—American Timber Products Co., capital stock \$10,000, inceptd. by John R. Cheek, W. H. Heyman and Mary L. Christensen.

Tex., Orange.—Lutcher & Moore Lumber Co. will rebuild planer and sawmill reported burned at loss of \$150,000.

Va., Suffolk.—J. S. Brinkley Lumber Co. will rebuild boiler-house reported burned at estimated loss of \$1000.

METAL-WORKING PLANTS

Mo., Kansas City.—Culverts, etc.—Killey-Carswell Mfg. Co., P. L. Killey, Prest., will establish galvanized metal factory to manufacture corrugated culverts, road machinery, road tools. (See Miscellaneous Factories.)

W. Va., Dunbar.—Enamelware.—Fletcher Enamel Co. will build addition to plant.

MINING

Ala., Angel.—Siliconite.—White Siliconite Co., Robt. R. Zell and Gilbert Halvorsen, proprietors, 5 Watts Bldg., Birmingham, Ala., will develop 60 acres mineral lands; now receiving prices on complete equipment to pulverize and bag 50 tons barytes or siliconite daily; considering tube mill; not decided on power—gas engine or electric; Gilbert Halvorsen, Treas.; Robt. R. Zell, Mgr. (See Machinery Wanted—Pulverizing Machinery.)

Ala., Russellville.—Iron.—Sloss-Sheffield Steel & Iron Co., Birmingham, will expend \$50,000 at Russellville iron-ore mines; improvements to include 6000 ft. 10-in. pipe line, 10-in. 2-stage centrifugal pump (electrically driven) to provide additional water for brown-ore washers, central power station of 2 Westinghouse turbo-generators of 300 K. W. each, several miles copper transmission line (on cross-tied poles) leading to pumping station and various washers, electric motors to drive 3 washers and the others to be electrified later, generators' voltage to be 2400 stepped up to 6600 volts for transmissions and used as motors at 220 and 550 volts; power-house of brick and concrete construction, with metal sash windows and doors; improvements also contemplate doubling water-storage capacity (at central pumping station) by raising dam (now 3 ft. high and 1000 ft. long) and providing new concrete spillway and relief valves in bottom; has ordered construction materials; plans are under way for improvements to North Birmingham furnace, but no appropriation has been made. (Lately briefly noted.)

Ark., Harrison.—Pyatt Mining Co. (lately noted inceptd., capital \$10,000) will develop 40 acres; machinery purchased; Jeffery Dixon, Prest.; J. Sam Rowland, V.-P.; M. H. Pierce, Secy., Treas. and Mgr.

Ark., Hot Springs.—E. C. McGraw Mining Co., capital \$100,000, inceptd. by C. A. McConnell, Prest.; J. S. McConnell, V.-P.; Vernon P. Williams, Secy.-Treas.

Ark., Viola.—Zinc.—C. L. Kennard of Co-operative Zinc Co. is reported to have leased land containing deposits of carbonate of zinc and will develop.

Ga., Trenton.—Cherokee Minerals Corp., capital \$5000, chartered by Robt. L. Millett and Henderson Hallman, both of Atlanta, Ga.

Mo., Joplin.—Lead and Zinc.—Little John Mining Co., capital \$20,000, inceptd. by O. Longacre, Jr., F. B. Butler and A. W. Thurman.

[Continued on Page 57.]

Baldwin Locomotive Works in Record-Breaking Time Building Great Plant

TO MAKE WAR MUNITIONS FIRST AND BUILD LOCOMOTIVES LATER.

By ALBERT PHENIS.

The constructive genius of the whole country is now being mobilized to build in record time some of the greatest industrial plants ever established in the United States as a result of the demand from Europe for war supplies. Many of the foremost industrial interests in the United States are now building plants which, in the ordinary course of the country's development, would probably not have been constructed for a decade or more. When the war is over these plants will be immediately available for the usual routine business of the companies owning them, giving to them facilities for work such as they never before possessed and enabling them to secure out of profits on war supplies immensely valuable and thoroughly modern plants. This is strikingly illustrated in the magnificent shops now being built by the Baldwin Locomotive Works at Eddystone, 12 miles south of Philadelphia, for the temporary use of the Remington Arms Co. The main building, a panoramic view of which is given on the following page, covers 15 acres of ground.

This gigantic plant, one of the largest in the country, is being constructed in record-breaking time. It is to be completed not later than September 1, although ground was not broken for it till the 11th day of May of this year.

The Baldwin Locomotive Works, which in busy times employs more than 19,000 hands, most of them skilled mechanics, is one of the great industrial institutions of the nation. Some years ago, looking to the future needs of the company, land at Eddystone was purchased and a few shops were erected to operate in connection with the main plant, so long one of the noted sights of Philadelphia. The company had looked forward to the time when the development of the country would make it wise to build at Eddystone the most modern and complete locomotive plant in America. But it had been anticipated that it would not be feasible or wise to undertake this great scheme for some years to come. As a result, however, of the demand for war materials a plan was worked out by which the company is building this plant at Eddystone, which is to be used until the end of the European war, but for not less than two years, by the Remington people in the manufacture of rifles. The construction of this plant will enable thousands of the former employees of the Baldwin Works, who for several years have lacked employment by reason of the dullness in railroad building operations, to secure employment. The arrangements made by the Remingtons and with another company which has been organized to utilize a portion of the Baldwin plant for making other war munitions, will give to the Baldwin Locomotive Works not only a very large cash profit, but, in addition, practically without cost, the largest and most complete locomotive plant in America, doubtless the most complete in the world.

Therefore, when studying the results of these war orders which are now receiving so much attention in this country, it should be borne in mind that they come at a time when the iron and steel industry was almost at its lowest ebb, when railroad building was practically dead and when tens of thousands of workmen were out of employment. As an outcome of this business, vast plants are being established; the demand for certain lines of machinery-working tools has become so great that it is difficult to buy some tools for delivery within 12 months; construction activities have vastly increased the demand for iron and steel in the erection of these buildings, and an industry which had for several years been depressed has suddenly become active and prosperous and the whole iron and steel and allied interests have been lifted out of the slough of despond to a high state of prosperity. Looking to the future, moreover, these shops which are being built by the Baldwin Locomotive Works and others will be available for the man-



PROGRESS PICTURES, SHOWING THE EARLIER STAGES OF THE WORK. NOS. 1 AND 2 TAKEN ON MAY 18, SEVEN DAYS AFTER BREAKING GROUND. NO. 3 TAKEN MAY 27.

PROGRESS PICTURES OF NEW PLANT OF THE BALDWIN LOCOMOTIVE WORKS



manufacture of war munitions should this country at any time, unfortunately, be engaged in war, or they will be ready when this war is over, if we maintain peace with the world, to carry forward the constructive, upbuilding operations in iron and steel and kindred work which by that time will be inevitable in the natural growth of the country.

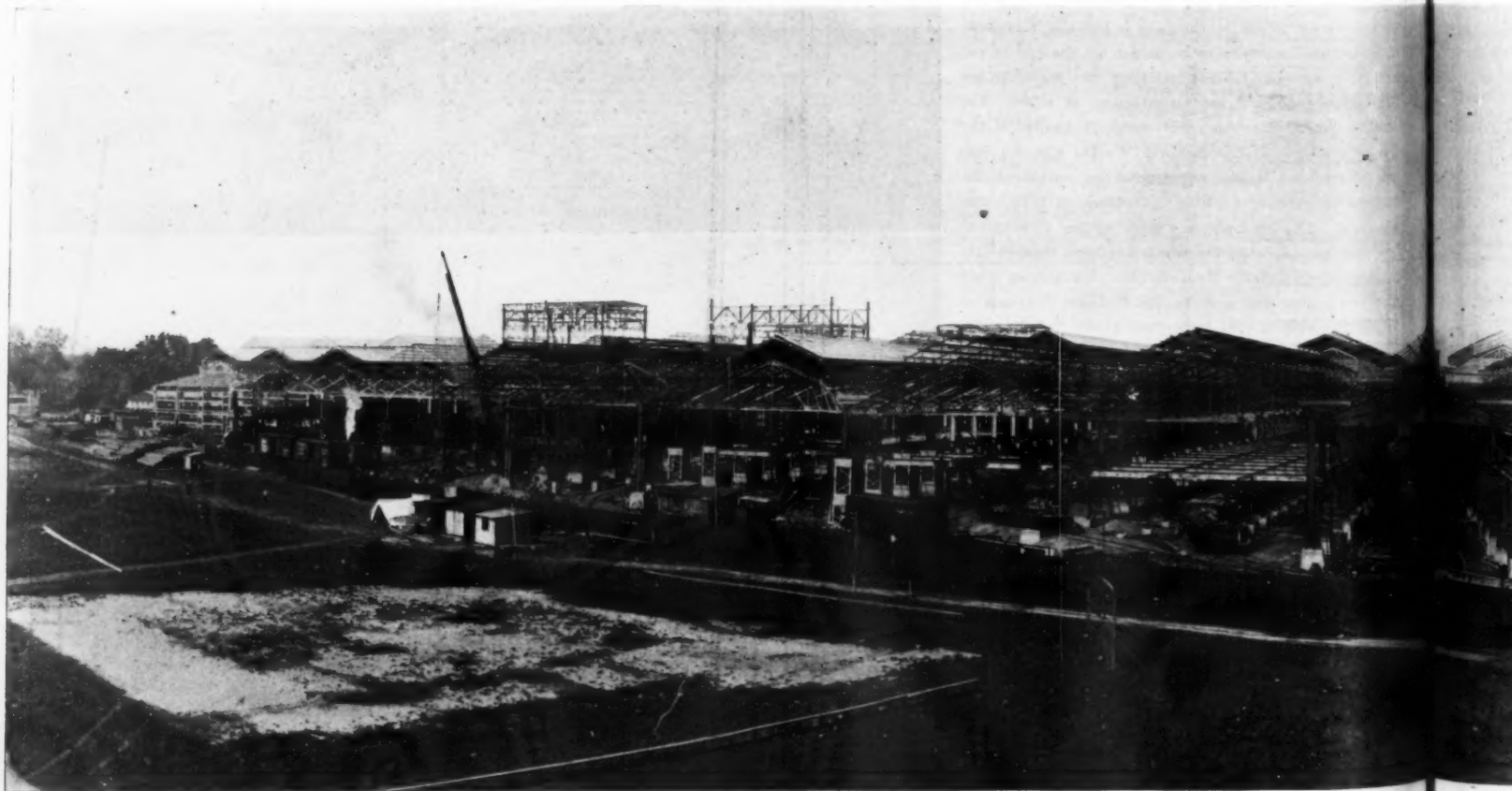
The building of this Baldwin plant, and all the work now being done in the building of plants of a similar kind, will thus help to safeguard the future of this country, while at the same time these operations mark

one of the great epochs in the advancement of the iron and steel industry of the nation.

Progress pictures, some of which are given herewith, indicate the rapidity with which the work of this Baldwin plant has been pushed. The engineer of plant of the Baldwin Locomotive Works, Bernard T. Converse, received verbal instructions on May 6 to go ahead with the plant. Work was started on May 11. One of the photographs shows the progress that had been made a week later; others show the progress from week to week up to August 5, on which date the panoramic

view was taken. On the site where this immense building now stands there were on May 11 forest trees and an orchard.

Ultimately these works will be fitted up as boiler shops, machine shops, etc., for the Baldwin Locomotive Works. The urgency for their construction now is the necessity of the Remington Arms Co. for additional shops to fill a large order for rifles for the Russian Government. Instead of duplicating either of their immense plants at Ilion, N. Y., and Bridgeport, Conn., the Remington people preferred to make temporary arrangements



PANORAMIC VIEW OF THE MAIN BUILDING, 1040 FEET LONG BY 816 FEET WIDE

LOCOMOTIVE WORKS FOR WHICH GROUND WAS BROKEN MAY 11, 1915



for the shop room required. As the Baldwin company had planned the construction of extensive additions at Eddystone, where they had already erected shops, foundry, etc., the Remington Arms Co. was able to make an arrangement by which the contemplated addition would be built at once and leased to the arms company.

Machinery is already being installed in the partially finished sections, and the plant will be in operation in September. Maximum capacity, however, which is reported to be 1,500,000 rifles a year, will hardly be reached for a year.

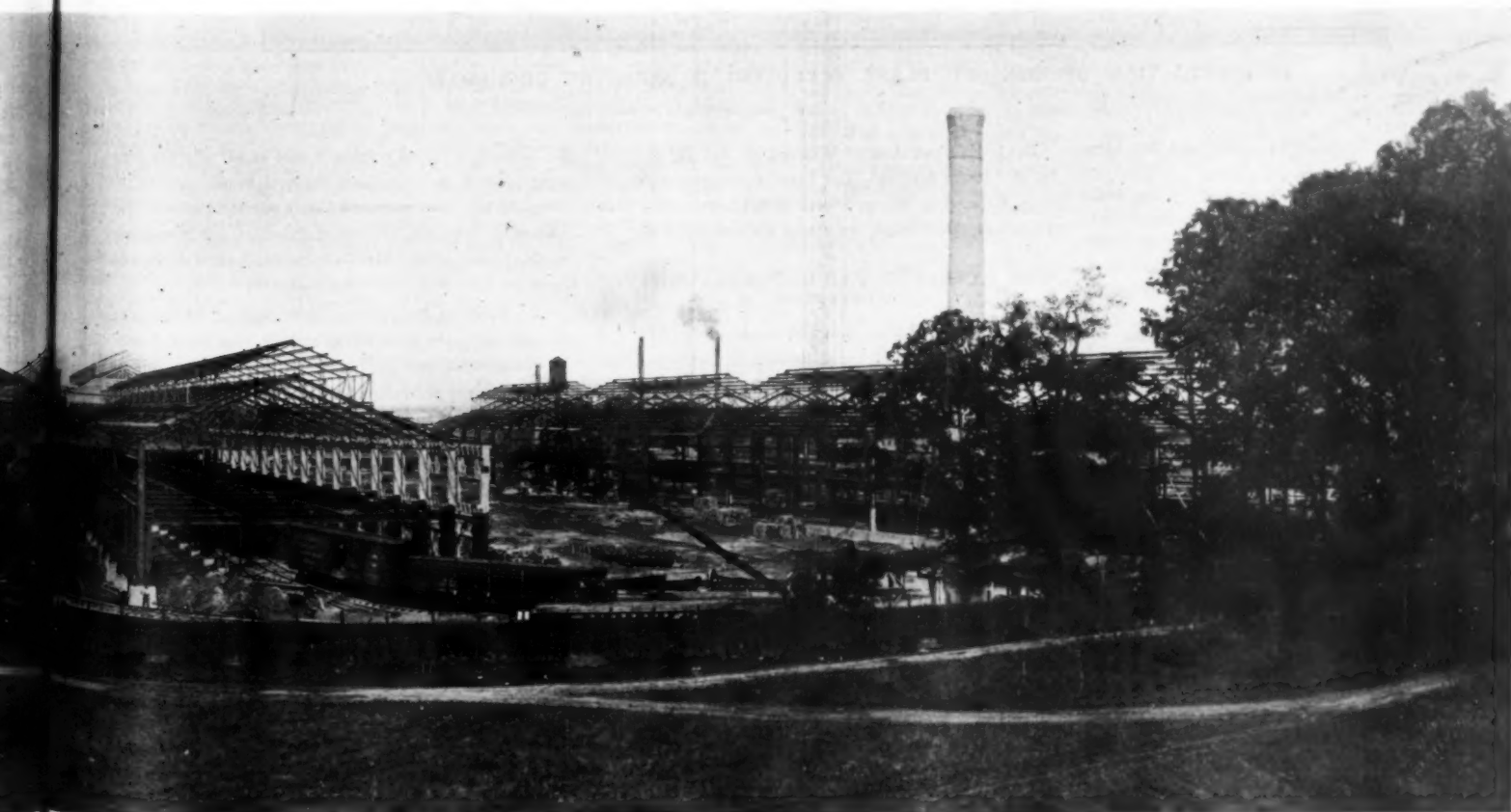
This great undertaking is typical of what can be done in this country and of what is being done in the East, and is an object-lesson of tremendous value to the South.

At the same time, there is a lesson here to the country at large. Although it is probably the most rapidly constructed big plant ever built, the fact that it takes several months to get it in order to turn out war materials, and that it will not be in maximum operation for a year, strikingly illustrates how, in the event of war against this country, we might be overrun before we

could build plants in which to produce the war materials we lack.

There is also an illustration here of why the Allies have not been able to more vigorously push the war, when in this country, with labor seeking employment, plants seeking business, railroads ready to move everything without delay, with unlimited capital and with every possible incentive for quick work, it will yet, according to the estimates of the Remington people, be a year before the new plant can be in full operation.

The main building at Eddystone is 1040 feet long,



40 FEET BY 816 FEET WIDE, MAXIMUM, AS IT APPEARED AUGUST 5.

with a maximum width of 816 feet. Separate from it is the woodworking shop, with boiler-house for the heating plant in one end of it. This building is 600x80 feet. A third building for the drykilns is 532.6x94.4 feet.

The buildings are of steel frame construction, on concrete supports, hollow tile walls, roofing of wire glass, tile and composition. To give the maximum amount of light, in addition to the light from the glass of the roof, the outer walls of the main buildings are occupied by window space to the limit of practicability. In converting the shops to present uses, intermediate floors are being put in. This will give a total floor area of 37½ acres. For conserving the lighting, sections or bays with two and three floors alternate with those having but one floor.

The same unique ground plan was adopted here as in the erecting shop alongside. The width of the building is increased in steps. At each step two tracks enter the building, one on each side. All material enters the building at the sides, to be then handled by traveling cranes and delivered where it is needed.

penyer work. The brick work and the carpentering were let to numerous contractors.

The Baldwin Locomotive Works bought all of the lumber and the windows--sash, glass, windows, complete. The sash were bought from Brown, Groves, Vincent & Co., Akron, O., and the Ward Building Co. puts them in.

O. W. Ketcham of Philadelphia furnishes the hollow tile for the walls.

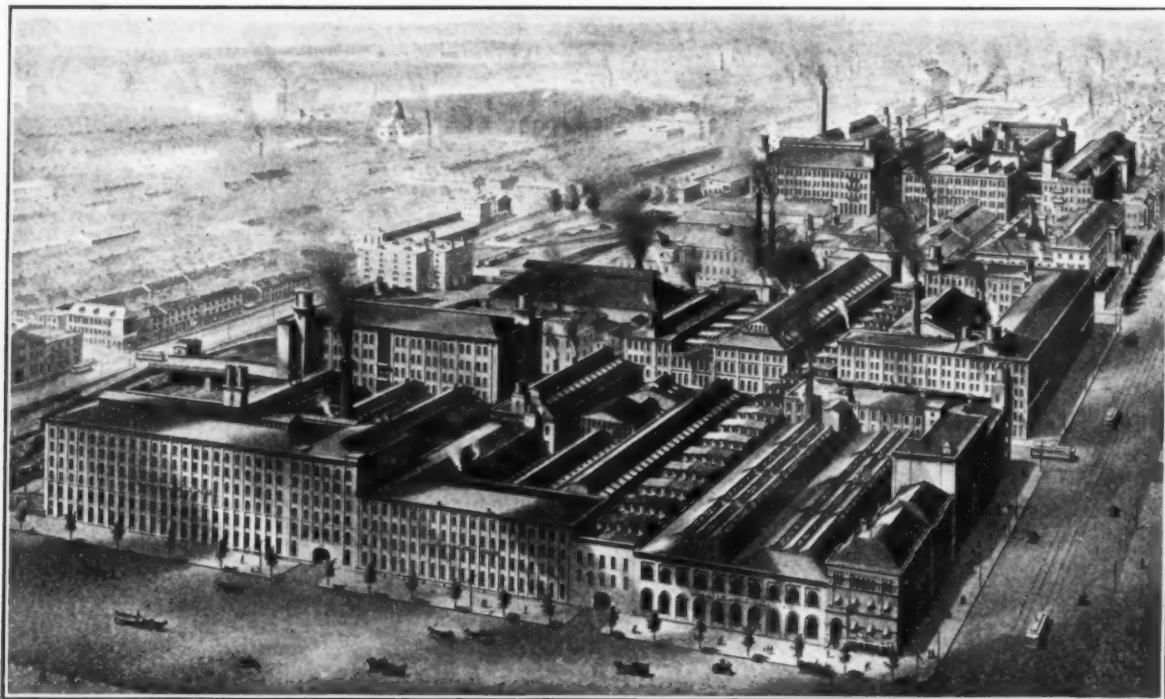
The composition used on parts of the roof are of gypsum and sawdust, reinforced with wire and rods. This material is light and cheap, non-conducting, and doesn't sweat. It is the Metropolitan Fireproofing Co.'s system and furnished by the Keystone Fireproof Co. It has a slag covering, furnished by the Ehret Roofing & Manufacturing Co. of Philadelphia, who also has the contract for the flashings and downspout work. The American Cement Tile Co. furnishes the roof for the monitors.

The 14 elevators in the building are furnished by Albion Elevator Co. of Philadelphia. The Belmont Iron Works has the contract for the elevator shafts.

for further extensions. Expansion for some time had been by building more stories. It was decided to get where expansions could be made horizontally instead of perpendicularly.

A tract of 184 acres was bought at Eddystone, 12 miles south of Philadelphia, on the Pennsylvania, B. & O. and Lehigh Valley railroads and the Delaware River. The acreage has since been increased to 225. A foundry, boiler shop and riveting plant, smith shop and hammer shop, rolling mill for bolts and rods, pattern shop and storage shops for patterns were built, and in 1912 the big erecting plant, occupying 7½ acres, was completed. Since 1907 practically all the extensions to the works have been made at the Eddystone plant.

An ultimate removal of the entire plant to Eddystone had been regarded as inevitable, but not imminent, as it required a good deal of time and much money to effect so prodigious a move. That the time for a beginning is approaching the officers of the company evidently believe. In talking about the situation with President A.



BIRD'S-EYE VIEW OF THE OLD PLANT, OCCUPYING 15 ACRES OF GROUND SPACE.

The main building contains 13 aisles, with 341 bays, 24x80 feet each.

There are four bull towers, 80x48 feet, 74 feet high. In each one space is provided for three hydraulic riveters for riveting boilers when the ultimate use of the building is reached. Each tower will then contain three overhead electric cranes to hold boiler-shells and lift them in the air while being riveted.

Three transformer houses take current from the Philadelphia Electric Co. at 13,000 volts, alternating current, 3-phase, 60-cycle, and transform it down to 440 volts. The plant will use about 5000 kilowatts.

Contracts for the work were let on the unit plan. It was impossible to crowd so big a job on any other plan. The McClintic-Marshall Company got the entire contract for the steel work. They put all their own works on it--Pittsburgh, Pottstown, Rankin and Carnegie, and then sublet a part to the Fort Pitt Bridge Co. The work of each was handled as a separate job. The steel used in the construction amounts now to 10,253 tons.

From 1000 to 2000 men have been employed on the work. This, however, represents but a fraction of the army of men who have been engaged on the job, most of the work having been done at the shops.

An enumeration of the contracts that have been let gives some indication of the way the work has been carried out.

Seeds & Derham of Philadelphia were given the contract for all the grading, foundation and concrete work, for the underground drainage and for some of the car-

Benj. F. Shaw Co. of Wilmington has the contract for the steam heating. For heating purposes there are three Babcock & Wilcox boilers of 600 horse-power each. They will also furnish the steam for the drykilns.

VAST EXTENT OF THE BALDWIN COMPANY'S ACTIVITIES.

The history of the Baldwin Locomotive Works is largely the history of the American locomotive. Matthias W. Baldwin, a Philadelphian, built one of the very first locomotives in this country in 1832, and the shops he founded have continued in unbroken existence since that time. The plant has expanded from the unpretentious machine shop he first occupied on an alley near Walnut and 4th streets, to works that now spread over 15 acres of ground space in the heart of Philadelphia. The removal to the Broad street location occurred in 1835, and the founder long survived to enjoy a fame which gave him eminence throughout the industrial world, his death occurring in 1866.

The business always has been in capable hands, and its expansion has been steady and increasingly great. Up to 1860 there had been 2000 locomotives built at the works. Since that time 40,000 have been built, 2066 having been turned out in one year, the banner year of 1906. The present organization is based on a capacity of 2500 locomotives a year.

In 1906, the capacity of the plant having been reached, it became evident that a new location was necessary

B. Johnson, a friend remarked that manifestly the company believed that increased business would come to the company after the war, sufficiently soon and of sufficient volume to warrant the construction of the new plant at this time. "Yes," Mr. Johnson is reported as saying, "and we have never yet been fooled."

The Baldwin company is capitalized at \$40,000,000. In addition to the great works and the 15 acres of ground in Philadelphia and the plant and 225 acres of land at Eddystone, the company owns the stock of the Standard Steel Works at Burnham, Pa. It owns 103 acres of land at Burnham, on which is the extensive and very complete plant of the Standard Steel Works Co. An important part of the company's business is the manufacture of steel tires and wheels for locomotives and railway cars.

In 1911, 370 acres of ground were bought by the Baldwin company at East Chicago, Ind. Plans were subsequently developed looking to the construction in the future of works for the manufacture of tires and wheels as part of the business of the Standard Steel Works Co., and for the building of locomotives as a part of the business of the Baldwin Locomotive Works. Thus there has been abundant provision made for future expansion, at Eddystone and Burnham in the East and East Chicago in the Middle West, as the number of acres in these three locations totals but two less than 700.

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Mo., Joplin—Lead and Zinc.—Tar Creek Mng. Co., capital \$50,000, incptd. by O. Long-acre, Jr., and P. B. Butler of Joplin and J. E. Reno of Carthage, Mo.

Mo., Joplin—Lead and Zinc.—Spurgeon Tiger Mining Co., capital \$30,000, incptd. by C. W. Edwards and A. M. Slye of Joplin, W. H. Whitlock of Carthage and others.

Mo., Neosho.—Neosho Mining Co. organized with J. E. Hinton, Pres.; Chas. Bushner, Mgr.; E. E. Newton, Secy.-Treas.; let contract Chas. Bushner to drill 1000 ft.

Mo., Porto Rico, P. O. at Carterville—Lead and Zinc.—Trinity Lead & Zinc Mining Co. is reported as planning to expend \$15,000 in improvements at 2 concentrating plants.

Mo., Porto Rico, P. O. at Carterville—Lead and Zinc.—Marjorie Stewart Mining Co., capital \$25,000, incptd. by C. C. and Geo. H. Playter, C. S. Bankard and others, all of Joplin, Mo.; has 20-acre lease; will build concentrating plant with capacity of 20 tons per 10-hour shift; 250 H. P. gas engine to furnish power.

N. C., High Point.—Eureka Mng. Co., capital \$10,500, incptd. by D. E. Hammer, E. A. Hammer and others.

Okla., Miami.—Apex Mining Co., capital \$100,000, incptd. with O. P. Wilson, Pres.; W. P. McNaughton, V.-P.; J. E. Smith, Treas.; G. W. Bever, Secy.-Mgr.; will develop mining leases.

Okla., Oklahoma City.—Minerals.—Circle Park Mineral Co., capital \$10,000, incptd. by Leonard Heartley and Frank Halloway of Oklahoma City and R. L. Tyler of Perry, Okla.

Okla., Tulsa.—Zinc.—Frank W. Koch and John Brock leased zinc-mining property and plans development.

S. C., Charleston.—Tin.—United States Tin Co., capital \$15,000, incptd. by W. P. Cornell and T. I. Simmons.

Tenn., Chattanooga.—Stone and Marble.—Chattanooga Stone & Marble Co., capital \$30,000, incptd. by Chas. E. Smith, J. B. Greenwood, John Rushworth and others.

Tex., Van Horn.—Zinc.—H. W. Fairbanks and David Byrnes, both of Dallas, contemplate development of zinc deposits.

Tex., San Saba.—Marble.—Green Marble Co., Box 36, incptd., capital \$100,000; G. R. Green, Pres. and Mgr.; R. S. Crain, Secy.-Treas.; install marble-quarry equipment, probable cost \$20,000.

MISCELLANEOUS CONSTRUCTION

Ala., Tuscaloosa.—Wharf.—City engaged Geo. Jacob Davis, Jr., to prepare plans for wharf on Warrior River.

Ark., Dumas.—Levee.—Linwood and Auburn Levee Dist. Commrs., Gus Waterman, Pres., let contract Lannan Bros. & Panzey of Minden, La., to construct levee through State convict farm at Cummins; require removal of 35,000 yds.; estimated cost \$50,000.

Fla., Dunedin.—Pier.—City, Walter Bull, Mayor, will vote Sept. 14 on \$1800 bonds for construction public pier; lately noted. (See Road and Street Work.)

Fla., Jacksonville.—Dredging and Rock Removal.—Government let contract Standard American Dredging Co. of Oakland, Cal., at \$179,065 for dredging and rock removal in St. Johns River between Jacksonville and Newport, about 25 mi. (Lately noted.)

Fla., Jacksonville.—Wharf Front.—Commodore Point Terminal Co. will soon let contracts to construct about 6074 lin. ft. wharf front at Commodore Point, St. Johns River; improvements include 304 lin. ft. wooden construction, 700 ft. steel sheet piling and 5070 ft. concrete-steel construction; all wharf front to be filled solid with sand dredged from river; river dredged to 30 ft. along face of wharves; top of fill 4 ft. above mean low tide; Herbert D. Mendenhall, Consult. Engr., 216 Parker St., Jacksonville. (Previous notices included incorporation, capital stock \$900,000; Arthur G. Cummer, Pres.)

Fla., Miami.—Channel, etc.—City votes Sept. 21 on \$645,000 bonds, of which \$300,000 will be expended to construct ship channel in Biscayne Bay; \$40,000 to construct local railway; \$50,000 to pay city's share of cost of constructing sanitary sewers; \$75,000 to build bridge over Miami River at 12th St.; \$75,000 to construct bridge over Miami River at Ave. D; \$25,000 to construct bridge over Miami River at Ave. G; \$23,000 to erect hospital; B. H. Klyce, City Engr. (Lately noted.)

Fla., Tallahassee.—Locks and Dams.—Everglades Drainage Dist. Commrs. will construct 3 locks and dams; bids until Aug. 24; F. C. Elliott, Ch. Drainage Engr. (See Machinery Wanted—Locks and Dams.)

La., New Orleans.—Jetty.—A. F. Alexander of New Orleans has contract at \$47,640 to furnish and place 12,000 tons of stone on Jetty at Southwest Pass, Mississippi River.

La., New Orleans.—Banquette.—City will construct banquette work along several streets; bids until Aug. 17; A. G. Ricks, Commr. (See Machinery Wanted—Banquette Construction.)

Md., Baltimore.—Dredging.—Government will dredge certain rivers and harbors on east shore of Chesapeake Bay; U. S. Engr. Office, 309 Custom-house, Baltimore, receives bids until Sept. 15. (See Machinery Wanted—Dredging.)

Md., Baltimore.—Coal Pier.—Baltimore & Ohio R. R. Co., F. L. Stuart, Chief Engr., Baltimore, will soon complete tentative plans for construction of additional coal pier (previously mentioned) at Curtis Bay; has not determined final details, but pier will probably be 700 ft. long by 110 ft. wide and cost about \$1,000,000; has not decided capacity; present pier has capacity 2000 tons coal per hr.

Miss., Greenville.—Levee.—Mississippi Levee Commrs. will construct 544,000 cu. yds. levee work; bids until Aug. 17; W. L. Thompson, Ch. Engr. (See Machinery Wanted—Levee Construction.)

Va., Richmond.—Channel Widening.—Administrative Board directed Chas. E. Bolling, City Engr., to make surveys for widening canal ways in clear of Shockoe Creek from 20 ft. present measurement, to 30 ft.; estimated cost of widening from mouth of creek at James River to 7th and Hospital Sts., \$500,000.

W. Va., Elm Grove.—Swimming Pool.—Elm Grove Catholic Orphanage, Rev. Edw. E. Weber, Secy., Box 176, Wheeling, will construct swimming pool; cement; 50x10 ft.; cost \$500; let contract to H. W. Hugger, 504 S. Broadway St., Wheeling, W. Va.

MISCELLANEOUS ENTERPRISES

Ala., Gadsden.—Crematory.—City let contract Nye Odorless Crematory Co., Macon, Ga., at \$4000 to build crematory.

Fla., Okeechobee.—Fishery.—Chesapeake & Gulf Fisheries Co. let lately-noted contract to Ralph E. Steele, Okeechobee, to erect 2-story 20x40-ft. mill-construction building; no machinery to be installed; product, fresh water fish, 2 carloads weekly.

Ga., Macon.—Printing.—Macon Printing Co., capital \$2000, incptd. by Albert Johnson, Alva G. Hightower and Walter S. Johnson.

La., Jeanerette.—Distributing Agencies, etc. Kimbrough Bros. (T. A. and W. C. Kimbrough) organized as manufacturers' and distributing agents. (See Machinery Wanted—Mill and Builders' Supplies, etc.)

La., Natchitoches.—Corn Elevator.—H. A. Cook, care of Crystal Ice & Bottling Co., is preparing to erect corn elevator; company to be organized later. (See Machinery Wanted—Elevator (Corn) Machinery.)

Mo., Joplin.—Greenhouses.—Joplin-Galena Greenhouse Co., capital \$15,000, incptd. by Anna Lyscio, J. M. Short and Glena Duncan of Joplin and E. B. Morgan of Galena, Mo.

Mo., Kansas City.—Grain Elevators.—Kansas City Mill & Elevator Co. incptd. by F. H. Lehrock and others. (See Flour, Feed and Meal Mills.)

Mo., Kansas City.—Construction.—W. C. Mullins Construction Co., capital \$5000, incorporated by W. G. Mullins, M. A. Ayke and B. J. Donnelly.

Mo., St. Louis.—Dairy.—Pvely Dairy Co. will build dairy to cost about \$250,000; 1-story milk plant to cost \$82,000; 2-story stable to cost \$50,000; 1-story boiler-room to cost \$16,000; open shelter to cost \$2000; 12-in. concrete floors; total estimated cost of buildings \$153,000; install machinery to cost about \$160,000; Leonard Haeger, Archt., St. Louis; Gilsontie Construction Co., contractor, St. Louis.

Mo., St. Louis.—Engineering and Contracting.—W. J. Knight Engineering & Contracting Co., capital \$5000, incptd. by Walter J. Knight, Jas. R. Claborn and John R. Weinbrenner.

N. C., Oakboro.—Hardware.—Oakboro Hardware Co., capital \$50,000, incptd. by J. M. Haywood, T. A. Haywood and W. B. Cochran.

N. C., Durham.—Roofing and Cornice Construction.—Weeks Roofing & Cornice Co. organized to conduct roofing and cornice construction. (See Machinery Wanted—Roofing and Cornice materials.)

N. C., Wilmington.—Marine Railway.—Hamme Marine Ry. (R. F. Hamme and R. F. Hamme, Jr.) will establish lately-noted marine railway for repairing vessels up to 250 tons; erect building costing within \$2000.

Okla., Henryetta.—Construction.—J. J. Harrison Construction Co., capital stock \$10,000, incptd. by J. J. Harrison, H. B. Christopher, C. E. Harrison and E. I. Harrison.

Okla., Oklahoma City.—Publishing.—Farmers' Co-operative Journal, capital \$2500, incorporated by J. K. Armstrong and S. O. Daws of Oklahoma City, J. S. Moore of Altus, Okla., and J. B. Tosh of Hobart, Okla.

Okla., Tulsa.—Cleaning and Hat Blocking. Wm. O. Bohnefeld, Box 481, will open bids Sept. 1 on \$3000 storeroom building at 118 E. 3d St.; 2 stories, with provision for additional story; 29x65 ft.; fireproof; tar and gravel roof; concrete (cement) floor; hand elevator. (See Machinery Wanted—Office Fixtures.)

S. C., Gaffney.—Ballast.—B. D. Foster Ballast Co., capital \$10,000, incptd. by A. L. Foster, J. N. Lipscomb and H. D. Foster.

Tex., Dallas.—Publishing.—American Home Journal Publishing Co., capital \$15,000, incptd.; W. J. Glynn, Pres. and editor; Dr. J. H. Cristler, V.-P.; J. P. Hatfield, Secy., Treas. and Bus. Mgr.

Tex., Laredo.—Abattoir.—City plans to build abattoir. Address The Mayor.

Tex., McAllen.—Corn Elevator.—McAllen State Bonded Warehouse Co. will build corn elevator with capacity 10,000 bus. shelled corn.

Tex., Plainview.—Cattle.—Bettie Cattle Co., capital stock \$50,000, incptd. by Grissom Bettie, Saml. Bettie and H. C. Randolph.

MISCELLANEOUS FACTORIES

Ark., Little Rock.—Safety Tires.—Davenport Safety Tire Co., capital \$100,000, incorporated; J. R. Alexander, V.-P.; W. H. McLaughlin, Secy.-Treas.

D. C., Washington.—Bakery.—Peter M. Dorsch let contract to Arthur M. Poynton, 714 15th St. N. W., Washington, to erect bakery at 637-41 S. St. N. W.; cost \$10,000; Simmons & Cooper, Archts.

Fla., Green Cove Springs.—Turpentine.—Smith Turpentine Co., capital \$10,000, incptd.; J. S. Smith, Pres.; L. E. Carter, V.-P.; Manley Luck, Secy.-Treas.

Fla., Jacksonville.—Films.—Southern Film Corp., capital \$3000, chartered; D. C. Randolph, Pres.; F. P. L'Engle, Secy.-Treas.

Ga., Atlanta.—Chemicals.—United States Imperial Co., capital \$20,000, incptd. by Wm. L. Gwaltney and E. L. Meyer.

Ga., Brunswick.—Naval Stores.—Yaryan Rosin & Turpentine Co., capital \$1,000,000, incptd. by Albert Fendig, A. M. Way and G. C. Smith of Brunswick, A. H. Bauer of St. Louis, Mo., and others; will acquire Yaryan Naval Stores Co. and Empire Investment Co.

Ky., Lexington.—Celery Syrup.—Celery Syrup Co., capital \$10,000, incptd. by R. C. Morgan, Alex. Hall and A. C. Chinn.

Ky., Louisville.—Soap.—Louisville Soap Co. will build addition to plant; cost \$10,000.

La., New Orleans.—Creamery.—Loisel Model Farm Co., Victor Loisel, Pres., will have plans prepared by Rathbone De Buys of New Orleans for creamery and dairy farm; erect creamery buildings, dairy barns, feed-houses, silos, milkhouses, etc.; provide dairy barns for 200 cows.

La., Shreveport.—Metallic Packing.—Rhodes Metallic Packing Co., capital \$20,000, incptd.; A. C. Lea, Pres.; Hampton P. Rhodes, V.-P.; Jas. R. Russell, Secy.-Treas.

Md., Baltimore.—Shipbuilding.—Baltimore Dry-dock & Shipbuilding Co. will construct 2 runways; length each 235 ft.; concrete; machine shop 60x220 ft.; steel; 30-ft. electric overhead crane; overhauling dry-docks; cost about \$100,000. (Lately mentioned.)

Md., Baltimore.—Household Articles.—General Products Co., capital stock \$100,000, incptd. by W. E. Beveridge (2113 Callow Ave.), E. B. Cockrell, both of Baltimore, and F. D. Burk, Wilmington, Del.; to manufacture household articles.

Md., Baltimore.—Guncotton.—Spanish-American Trading Syndicate incptd.; Jos. C. Reed, Pres., care of Norvell-Shapleigh Hardware Co., St. Louis, Mo.; Leon C. Russett, V.-P. and Treas., 1902 Eutaw Pl., Baltimore; F. D. Richardson, Secy., care of Texas & Pacific R. R., New Orleans, La.; contemplates expenditure \$50,000 for waterfront improvements, lint shops, equipment, etc., to manufacture guncotton; later may add manufacture of shrapnel, etc.

Mo., Kansas City.—Cheese.—Elkhorn Cheese Co., capital \$20,000, incptd. by D. S. Bailey, G. P. Tremain and A. A. Leavitt.

Mo., Kansas City.—Toys.—Quaddy Playthings Mfg. Co., capital \$50,000, incptd. by

Henry Sieben, Arthur C. Brown and B. R. Clarke.

Mo., Kansas City.—Road Machinery, Tools, etc.—Killey-Carswell Mfg. Co., 2932 Fairmount Ave. (lately noted incptd., capital \$2000), organized to establish galvanized-metal factory; P. L. Killey, Pres.; F. L. Carswell, V.-P.; Marion Housey, Treas.; manufacture corrugated culverts, road machinery and road tools. (See Metal-working Plants.)

N. C., Charlotte.—Inked Fabrics.—B. D. Emanuel & Co. of Muncie, Ind., will establish plant to manufacture inked fabrics.

N. C., Lincolnton.—Creamery.—Lincoln Co-operative Creamery Co. organized by T. A. Warlick, Dr. W. C. Kiser, D. H. Shields and others.

N. C., Old Town.—Clover Cutter.—Forsyth Clover Cutter Co., capital \$5000, incptd. by L. C. Hines, Reynolds Estate, H. W. Johnson, P. L. Holland and others.

N. C., Wilmington.—Bottling.—Mt. Olive Coca-Cola Bottling Co., capital \$5000, incptd. by G. H. Hutaff, W. J. Hutaff and Tadhia Hutaff.

S. C., Columbia.—Granite.—American Granite Co., Felix Solana, Mgr., Rion, S. C., let contract for 150x40-ft. \$3000 fireproof building; for plant (lately noted) to manufacture granite finished building and monumental stone; open machinery bids Aug. 17. (See Machinery Wanted—Granite (Monumental, etc.) Plant Equipment.)

S. C., Kingstree.—Bottling.—Kingstree Chero-Cola Bottling Co., capital \$10,000, incptd.; J. E. King, Pres.-Treas.; C. F. King, V.-P.; L. J. Morkey, Secy.

Tenn., Ducktown.—Sulphuric Acid.—Tennessee Copper Co., 2 Rector St., New York, will, it is reported, largely increase capacity for manufacturing sulphuric acid; rumored as in connection with large contract from foreign government. Advises Manufacturers Record: "Do not desire to give out any information at this time."

Tenn., Memphis.—Hair Tonic.—Florida Sunshine Hair Tonic Co., capital \$15,000, incptd. by Henry Kleitman, R. M. Jones, S. W. McCleskey and others.

Tenn., Tyner.—Cheese.—Mar Landess, L. S. Robinson and others are promoting establishment of cheese factory.

Tex., Dallas.—Macaroni.—Frank Bone of Houston Macaroni Co., Houston, will install macaroni factory at 2616 Main St. to cost \$25,000; has 2-story brick building; will operate as National Macaroni Mfg. Co.

Tex., Dallas.—Heermans Mfg. Co., capital \$5000, incptd. by W. T. Heermans, G. L. Cade and R. D. Allen.

Tex., Houston.—Bakery.—Henke & Pillot will make various improvements, including new bakery; Rezin D. Steele, Archt., 510 First National Bank Bldg., Houston; Chas. W. Raper, Contr. (See Building Contracts Awarded, Stores.)

Tex., Pecos.—Bakery.—R. N. Couch and Geo. D. Coone will enlarge City Bakery; erect concrete block building.

Tex., San Saba.—Marble.—Green Marble Co. (lately noted incptd., capital \$100,000) will establish marble quarry. (See Mining.)

Va., Buckingham.—Slate Products.—Buckingham Slate Products Corp., authorized capital \$500,000, chartered; John B. Boatwright, Pres.; E. W. Hubbard, V.-P.; W. J. Hubbard, Secy.-Treas.

W. Va., Charleston.—Dye Chemicals.—Warner-Klipstein Chemical Co., 644 Greenwich St., New York, will build \$200,000 plant; purchased 12-acre site; use electric power; manufacture mainly carbon tetrachloride, with caustic soda and synthetic dyes as by-products; not prepared to announce further facts.

W. Va., Charleston.—Violins.—American Violin Co., 94 Charleston St., N. P. Perkins, Pres.-Mgr., proceeding with development and manufacture of special machinery (noted in May) and will begin manufacture of violins about Sept. 1 with initial daily capacity of 24 instruments; later will erect suitable factory building; A. C. Calderwood, V.-P.; W. A. Cantrell, Secy.-Treas.

W. Va., Dunbar.—Glass.—Thatcher-Whittemore Glass Co. contemplates building addition to plant.

Va., West Norfolk.—Dyes.—Virginia Smelting Works will, it is reported, build plant to manufacture dyes from copper fumes.

W. Va., Kenova.—Chemicals.—Basic Products Co. (main office, Chicago, Ill.) will erect additional building, several bins and smaller structures; let contract Allis-Chalmers Mfg. Co., Milwaukee, Wis., to furnish equipment, including rotary lime kilns, rock-crushing machines and electrical apparatus; total cost to exceed \$100,000.

MOTORS AND GARAGES

Ala., Anniston.—Automobiles.—Anniston Auto Co., capital \$200, incptd.; A. L. Scarborough, Pres.; W. A. White, Secy.-Treas.; Arthur Bosworth, Supt.

D. C., Washington.—Assembling Plant.—Ford Motor Co. let contract to Irwin & Leighton, Keyser Bldg., Baltimore, to erect building for assembling plant at Pennsylvania Ave. and John Marshall Pl.; 6 stories, 200x150 ft.; fireproof; tile roof; concrete floor; marble and white enamel face brick front; cost about \$250,000; mechanical equipment, including elevators, heating, plumbing, lighting, separate; Albert Kahn, Archt., Detroit, Mich. (Noted in July.)

D. C., Washington.—Garage.—Wm. T. Davis has plans by N. T. Haller, 212 1/2 Corcoran Bldg., Washington, for garage at 1467 P St.; 3 stories; brick; cost \$800; construction by owner.

Fla., Orlando.—Garage.—S. G. Dollive will erect garage; 2 stories; brick.

Ga., Savannah.—Automobiles.—Savannah Auto Bus Co., capital \$250,000, incptd. by N. Markovitz of Savannah, Irving Cooper, Henry Cooper and Leon Shearman of New York and others.

Ky., Glasgow.—Garage.—Dickinson Bros. let contract Mack Applegate of Glasgow to erect Farmers and Tourists' Garage; brick.

La., New Orleans.—Garage.—Dr. A. M. Caine has plans by Callender & Parham for brick and concrete garage.

Md., Baltimore.—Garage and Salesroom.—W. D. McLaughlin let contract to McLaughlin Bros., 915 Bolton St., Baltimore, to erect garage, repair shop and salesroom at Charles and Oliver Sts.; 150x60 ft.; portion 50x60 ft.; 2 stories; 100x60 ft., 1 story; brick and concrete; concrete and wood floor; hot-water or steam heat; electric light; plans by contractor.

N. C., Elkin.—Automobiles.—Elkin Motor Co. (lately noted incptd., capital \$30,000) organized; E. F. McNeer, Pres. and Mgr.; W. W. Whitaker, V.-P.; R. H. Chatham, Secy.; Alex. Chatham, Jr., Treas.; erect 100x66-ft. brick ordinary construction building; J. W. Nelson, Contr.

Okla., Oklahoma City.—Assembling Plant. Ford Motor Co., Detroit, Mich., has plans by Albert Kahn of Detroit for assembling and service plant; 275x135 ft.; reinforced concrete foundation; front of pressed brick; covered platform; steel window sashes and frames and steel doors; automatic steel doors for elevator shaft entrances; sprinkling system supplied by 2 tanks—1 on roof with capacity of 150,000 gals. and 1 in basement with capacity of 200,000 gals.; sprinkler equipment to be operated by electric motors; display and sales rooms on ground floor; repair shop, 200x135 ft.; garage, 200x135 ft., on first floor, etc.

S. C., Camden.—Automobiles.—Kershaw Motor Co., capital \$500, incptd. by Geo. D. Shore and E. D. Shaw.

S. C., Greenville.—Automobiles.—Greelyville Motor Co., capital \$200, incptd. by C. L. Montgomery of Greenville and D. C. Shaw of Sumter.

S. C., Manning.—Automobiles.—Clarendon Motor Co., capital \$500, incptd. by J. C. Plowden of Manning and H. A. Ribbarg of Summerton, S. C.

Tenn., Chattanooga.—Garage.—Standard Oil Co. secured building permit to build garage; estimated cost, \$6000.

Tex., Amarillo.—Automobiles.—Western Motor Co., capital \$1000, incptd. by C. H. Dixon, W. L. Fore and C. C. Chenoweth.

Tex., Denison.—Automobiles.—Denison Motor Car Co., capital \$250, incptd. by B. S. Benedict, Frank Platter and W. W. Landford.

Tex., Fort Worth.—Garage.—W. M. Garner let contract W. J. Webb to build brick garage at 2004 Main St.; cost \$3500.

Tex., San Antonio.—Garage.—Mrs. R. Gunter will build garage to cost \$3000.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Tex., San Antonio.—International & Great Northern Ry. Co., O. H. Crittenden, Chief Engr., Houston, Tex., lately noted as purchasing 108 acres 5 mi. from San Antonio as site for shops and yards, etc., advises "Nothing definite yet."

ROAD AND STREET WORK

Ala., Attalla.—City let contract J. F. Morgan & Co. of Gadsden at \$2625 to construct road through city to top of ridge west of Attalla to connect with new Low Gap Rd.; excavate 8000 cu. yds. earth and stone.

Ark., Fort Smith.—Sebastian County Commissioners contemplate constructing road from Oklahoma State line of Sebastian county to Huntington, 15 1/2 mi.; Hugh Carter, State Highway Engr., Little Rock, estimates cost at \$105,000.

Ala., Gadsden.—Etowah County Road Com. let contract W. J. Bradford & Co. of Springville, Ala., at \$1963 to construct 3 1/2 mi. of Glencoe Rd., and to L. C. Pearson of Trussville, Ala., at \$5800 to improve 1 1/2 mi. of Low Gap Rd.

Ark., Jonesboro.—City will pave several streets. Address The Mayor.

Ark., Little Rock.—Pulaski county, Eagle township, petitioned County Judge Asher for improvement of 4 mi. of road; estimated cost, \$25,000.

Ark., Russellville.—Comms. Road Improvement Dist. No. 1 of Pope county let contract W. C. Juckach of Little Rock at about \$100,000 to construct 26 mi. macadam road from Arkansas River, opposite Dardanelle, to Hector; 26 mi.; 22-ft. roadway, with 12 ft. of macadam 9 in. thick; contract for bridges to be let separately; issued \$125,000 bonds; road to be first link in Russellville-Harrison highway to be constructed through Ozark Forest Reserve in Pope and Newton counties by Government, and to be extended to Harrison by improvement districts in Newton and Boone counties, total distance of about 100 mi.; also first section of circuit of 60 mi. of macadam road to be built in Pope county; 2 other improvement districts are being organized to complete circuit. (Lately noted.)

Fla., DeLand.—Volusia county, Dist. No. 5, will vote on \$175,000 bonds to construct roads and bridges. Address County Comms.

Fla., Dunedin.—City, Walter Bull, Mayor, will vote Sept. 14 on \$25,000 bonds; \$5500 for sanitary sewers and disposal plant; \$8000 for paving with vitrified brick, asphalt, macadam or other paving material; \$6100 for water-distribution system; \$4800 to construct public pier; with additional amount to be paid by property owners, a total of \$25,000 will be available for the proposed paving. (Lately noted.)

Fla., Kissimmee.—City voted on \$70,000 bonds for various improvements; authorized paving Main St. to Orlando brick road, costing \$12,000, and retiring of \$15,000 indebtedness; other issues were defeated. Address The Mayor. (Lately noted.)

Fla., Kissimmee.—Osceola County Comms. let contract Alabama Paving Co. of Birmingham to pave with vitrified brick about 3 mi. of roadway from Orange county line to Orlando, connecting Orlando and Kissimmee; width 9 ft.; concrete curbing; 4 ft. of marl on either side; cement grouting; J. L. Overstreet, Clerk Circuit Court. (Call for bids lately noted.)

Fla., Palatka.—Putnam county, Palatka Dist., votes Sept. 14 on \$208,000 bonds to construct brick roads. Address County Commissioners.

Fla., St. Petersburg.—City will pave with second-class vitrified brick, curb with granite or concrete and grade to 18th St. north from Central Ave. to 3d Ave. North; City Comms. receive bids until Aug. 12; W. F. Divine, City Clerk. (See Machinery Wanted—Paving.)

Fla., Sumterville.—Sumter county voted \$250,000 bonds to construct roads. Address County Comms. (Lately noted.)

Fla., Sarasota.—City let contracts for following asphalt and brick paving: Southern Asphalt & Construction Co., Birmingham, Ala., 40,000 sq. yds. 2-in. asphaltic concrete at \$44,000 (\$1.10 per sq. yd.); 20,000 sq. yds. rock foundation at \$10,700 (53 1/2 cents per sq. yd.), 6 in. thick, 5 mi. of 30-in. over all, and combination curb and gutter at 51 8-10 cents per ft.; Georgia Engineering Co., Augusta, Ga., 20,000 sq. yds. brick paving, at \$32,600, using Augusta block with asphalt filler, \$1.63 per sq. yd.; Fitch P. Wright, Commr. Public Works. (Bids lately noted.)

Fla., Tampa.—City let contract Edwards Construction Co., Tampa, to pave South Newport Ave. with bituminous macadam; 9300 yds. (Call for bids lately noted.)

Ga., Augusta.—City let contract Solesby & Co. at \$3199.98 for 7649 ft. curbing on Melges, Stovall and Whitney Sts.

Ga., Valdosta.—Lowndes County Comms. will construct road from Lake Park to Florida line, 4 mi., and from Valdosta to northern end of county.

Ky., Carlisle.—Nicholas County Comms. let contract Clark County Construction Co., Montebello Ave. and Jenkins La., Baltimore, at \$31,707.90 to improve Reisterstown Rd. from Baltimore city limits to Hayward Ave. through Arlington.

Ky., Carrollton.—Carroll county voted \$50,000 bonds to construct roads. Address County Comms. (Lately noted.)

Ky., Glasgow.—Barren County Comms. let contract at \$13,385 to construct 4 mi. of road from corporate limits of Tompkinsville toward Glasgow.

Ky., Hodgenville.—Larue County Comms. will improve Bardstown and Green River Turnpike.

Ky., Jamestown.—Russell county votes Aug. 21 on \$40,000 bonds to construct roads and bridges. Address County Comms.

Ky., Lexington.—Fayette county votes Sept. 30 on \$300,000 bonds to construct roads and pay county's share of cost of bridge to be built across Kentucky River by Fayette and Madison counties at estimated cost of \$150,000. Address County Comms. (Lately noted.)

Ky., Pineville.—Bell County Fiscal Court let contract Martin Green, Robt. Vanbever and Edward Pursfull of Pineville to grade 6 mi. of road from Pineville up Cumberland River. (Lately noted.)

La., Lake Charles.—Calcasieu Parish Police Jury will expend about \$30,000 to surface gravel roads with tarvia concrete; roads to be advertised embrace Calcasieu Lake highway, Westlake Sulphur Rd. and Choe-Iowa Rd.; also let contract to F. G. Lock at \$6000 to construct road west from Chouinque Bayou to Ged.

La., Mansfield.—City let contract Rich Bros. of Lake Charles, La., for 10,130 sq. yds. 3-in. vertical-fiber brick pavement, 3500 lin. ft. curb and 560 lin. ft. storm sewer; E. C. Huson, Town Clerk. (Call for bids lately noted.)

La., New Orleans.—Embankment.—City let contract to A. G. Thomas (care of Geo. Ferrer, Jr., Clerk Commission Council) at \$1,065 per cu. yd. to construct earthen embankment from Chef Menteur to the Rigolets. (Mr. Thomas lately noted as lowest bidder.)

La., New Orleans.—City will pave sidewalks, construct subsurface drains, curbs and gutter bottoms on Roosevelt Pl. from Dumaine to Orleans St.; bids until Aug. 17; A. G. Ricks, Commr. (See Machinery Wanted—Paving.)

La., New Orleans.—Hampton Reynolds of New Orleans is reported as lowest bidder at \$63,471 to construct gravel and macadam highway along prolongation of Patterson St. from General Merrill to Stanton Plantation; A. G. Ricks, Commr. of Public Finances.

La., Port Allen.—West Baton Rouge parish will gravel about 26 mi. of road in Road Dist. No. 1; Highway Dept. Board of State Engrs., Room 104, New Orleans Court Bldg., New Orleans, receives bids until Aug. 16; W. E. Atkinson, State Highway Engr., New Orleans. (See Machinery Wanted—Road Construction.)

Md., Baltimore.—City let contract Patrick Flanagan & Sons, 120 E. Lexington St., at \$34,447 to pave with sheet asphalt Hillen St. from Fallway to Ensor St., East St. from Fayette to Lexington and Gold St. from Calhoun St. to Druid Hill Ave.; all on concrete base. (Lately noted.)

Md., Bel Air.—Harford county will construct 1.3 mi. highway upon or along Norrisville and Lancaster Rd. between Norrisville and Pennsylvania line; bids until Aug. 16; W. A. Wheeler, Clerk. (See Machinery Wanted—Road Construction.)

Md., Chestertown.—Kent county let contract to McCarthy & Walker, Baltimore, Md., for concrete construction, Galena-Lambson Rd.; price \$23,919.80 (road to have no top dressing, and price of this to be deducted); bids were lately noted.

Md., Hagerstown.—Washington county will construct State-aid highway upon or along bed of county road 1 mi. east through Fiddlersburg for 16-10 mi., road leading from Cearfoss to Fairview for 1 mi., and on bed of county road leading from St. Paul's Church to McLaughlin Schoolhouse for 1.36 mi.; bids until Aug. 17; Barry M. Hartle, Clerk. (See Machinery Wanted—Road Construction.)

Md., Princess Anne.—Somerset county will construct section State-aid highway upon or along Eden Rd. from Allen to Eden for 2.01 mi.; bids until Sept. 7; John E. Holland, Clerk. (See Machinery Wanted—Road Construction.)

Md., Towson.—Baltimore county Comms. let contract American Paving & Contracting Co., Montebello Ave. and Jenkins La., Baltimore, at \$31,707.90 to improve Reisterstown Rd. from Baltimore city limits to Hayward Ave. through Arlington.

Miss., Columbus.—Lowndes county voted

\$50,000 bonds to construct roads in Fourth Supvrs. Dist. Address County Comms.

Mo., Farnfield.—City let contract Century Construction Co. of Chicago, Ill., at \$33,800 to pave 28,000 sq. yds. streets.

Mo., Jefferson City.—Cole county votes Oct. 19 on \$100,000 bonds to improve roads. Address County Comms. (Lately noted.)

N. C., Bakersville.—Mitchell County Commissioners let contract C. B. Geer & Co. of Rutherfordton, N. C., to construct 8 1/2 mi. of road in Grassy Creek township. (Lately noted.)

N. C., Concord.—City will pave streets; estimated cost \$5829.41; bids until Aug. 14; Reece Ira Long, City Engr. (See Machinery Wanted—Paving.)

N. C., Dobson.—Surry county, Silem township, appointed John Ambler, Winston-Salem, N. C., as engineer for lately-noted road construction; \$25,000 available.

N. C., Durham.—City let contract Robt. G. Lassiter of Oxford, N. C., to pave portion of Holloway St. with sheet asphalt.

N. C., Gastonia.—City voted \$150,000 road bonds, of which \$50,000 will be expended to construct roads, \$50,000 to repair and maintain roads already built, and \$50,000 to cover floating indebtedness; A. J. Smith, Clerk Board Comms. (Lately noted.)

N. C., Mocksville.—City will grade and construct sand-clay surface on Depot St.; plans ready within 2 weeks; John Ambler, Engr., Winston-Salem, N. C.

N. C., Newbern.—Craven County Comms. will improve Central Highway from Fort Barwell to Newbern, 22 mi.; W. F. Falls, Highway Engr.

N. C., Newbern.—City will repair and resurface present bituminous pavement on Lower Pollock and E. Front Sts.; about 11,000 sq. yds.; asphalt with gravel, fine stone or stone screenings; bids until Aug. 16; F. T. Patterson, City Clerk; R. R. Eagle, Engr. (See Machinery Wanted—Paving.)

N. C., Salisbury.—City voted \$20,000 bonds for street improvements and sewers. Address The Mayor. (Lately noted.)

Okla., Lawton.—Comanche County Comms. (J. J. Davis and others) will make lately-noted improvements; road grading and small concrete and steel bridges; expend \$35,000—\$20,000 for roads and \$15,000 for bridges. (See Machinery Wanted—Road Machinery.)

S. C., Gaffney.—City will pave 2 blocks of Limestone St. from Birnie to Robinson; N. H. Littlejohn, Mayor.

S. C., Greenwood.—City voted \$100,000 bonds to pave streets. Address The Mayor. (Lately noted.)

Tenn., Chattanooga.—City, Jesse M. Littleton, Mayor, will issue \$80,000 bonds for lately-noted street paving.

Tenn., Decatur.—Meigs county votes Sept. 2 on \$100,000 bonds to improve roads. Address County Comms.

Tenn., Knoxville.—Knox County Good Roads Com., 307 Holston National Bank Bldg., let contract R. L. Peters & Co. at \$138,577 to construct 42.3 mi. road; Donovan, Doughty & Taylor at \$64,021.86, 18.41 mi.; J. A. Kreis at \$35,379.75, 13.12 mi. and Dykes & Co. at \$5111.90, 1 mi.; Engrs., E. J. Gorham, 110 E. Scott Ave., and F. G. Phillips, 948 N. 4th Ave., both of Knoxville. (Call for bids lately noted.)

Tenn., Livingston.—Overton county defeated \$160,000 bonds for road construction (lately noted.)

Tenn., Memphis.—City will pave Front St. from S. Monroe to N. Court St. with wooden blocks; estimated cost \$11,000; J. H. Weatherford, City Engr.

Tenn., Rutledge.—Grainger county votes Sept. 9 on \$200,000 bonds to construct roads. Address County Comms.

Tenn., South Fulton, P. O. at Fulton.—City votes Sept. 4 on \$6000 bonds to improve streets and purchase bridges. Address The Mayor.

Tenn., Waverly.—Humphreys County Commissioners let contract Oliver-Hill Construction Co., Maryville, Tenn., at about \$30,000 to construct 200 to 250 mi. road; G. B. Howard & Co., Engrs., Nashville. (Lately noted.)

Tenn., Winchester.—Franklin County Commissioners contemplate election to vote on \$350,000 bonds for road improvements.

Tex., Center.—Shelby county, Judge Hugo B. Short, official in charge, will expend \$120,000 on highway construction; bids not to be opened before Sept. 1; Koch & Fowler, Consult. Engr., Dallas, Tex.; Engrs. (Koch & Fowler) are now making preliminary surveys and preparing plans and specifications for 16 to 20 mi. road lately mentioned.

Tex., Haskell.—Haskell county will vote Aug. 28 on road tax levy for building and maintaining roads. R. R. English may be addressed.

Tex., Livingston.—City voted \$17,000 bonds to improve streets and bridges; let contract to J. G. Browne Co., 708 Stewart Bldg., Houston, Tex., to design and build gravel streets. (Lately noted.)

Tex., McKinney.—City, H. A. Finch, Mayor, let contract to Levy & Levy, Dallas, Tex., for street paving; cost \$58,005; Engr., Chas. Schultz, McKinney. (Lately noted.)

Tex., Seguin.—Guadalupe County Comrs. let following contracts to construct roads: J. F. Hamer of Little River, 5 mi. Kingsbury-Staples Rd., cost \$800; W. K. Davis of San Antonio, 7 mi. Zorn-Redwood Road, cost \$14,000.

Tex., Sinton.—San Patricio county, Ingle-side Road Dist. No. 3, voted \$75,000 bonds to construct about 20 mi. of roads. Address County Comrs.

Tex., Victoria.—City, J. H. Flemings, Mayor, will issue \$30,000 bonds for street and bridge improvements. (Previously noted.)

Tex., Weatherford.—Parker county defeated \$60,000 bonds to construct roads, bridges, etc. (Lately noted.)

Va., Boydton.—City let contract to Laurence H. McCullough, Boydton, for additional sidewalks construction.

Va., Fairfax.—Fairfax county, Dranesville Dist., will vote on \$100,000 bonds to improve about 11 mi. of roads. Address County Comrs.

Va., Grundy.—Buchanan County Comrs., A. H. Pettigrew, Bristol, Va., official in charge, let contract to Vaughan & Redd, Council, Va., to construct lately-noted 2.9 mi. graded dirt road; \$6000 available for this construction; contract on remainder of road to Grundy not yet let.

Va., Orange.—City votes Aug. 31 on \$10,000 to improve streets and increase water supply. Address The Mayor.

Va., Staunton.—Augusta county let contract to Sands, Kline & Co., Staunton, to construct 3½ mi. bituminous-bound macadam road; \$16,000 available; B. W. Moore, Road Supt., Staunton. (Bids lately noted.)

W. Va., Broad Oaks.—City let contract to Chas. H. Hoyt, 514 Evans Bldg., Washington, D. C., to construct 13,550 sq. yds. paving and 23,900 ft. curbing; brick paving, concrete base; \$38,000 available; C. A. Osborn, Engr., 510 Union Bank, Clarksburg; bids lately noted. (See Machinery Wanted—Inlets (Sewer), etc.)

W. Va., Huntington.—City let following contracts to grade, curb and pave streets with No. 1 vitrified brick; Brubaker Construction Co., Walnut St.; Geo. Henkle, 10th Ave.; Harrison & Dean, 7th St. and 2 alleys; O. H. Wells, Commr. of Streets, Sewers, etc. Call for bids lately noted.)

W. Va., Jane Lew.—City votes Aug. 23 on \$15,000 bonds to improve street and roads, including sections of Main, High, Depot and 2d Sts., etc. Burket Hall, Mayor.

W. Va., Morgantown.—Monongalia county, Morgan and Union Dist., votes Sept. 18 on bond issues for road improvements—Morgan Dist. on \$300,000 bonds to improve all main roads leading into Morgantown, and Union Dist. on \$140,000 bonds to improve Union-town pike and Stewartstown Rd. Address County Comrs.

W. Va., Philippi.—City voted \$20,000 paving, light and sewer bonds. Address The Mayor.

SEWER CONSTRUCTION

Ark., Walnut Ridge.—City Council passed ordinance creating Water-Works and Sewerage Dist. No. 1; estimated cost \$60,000; W. E. Beloate, W. M. Ponder and W. E. Lane appointed Comrs.

Fla., Dunedin.—City, Walter Bull, Mayor, will vote Sept. 14 on \$5500 bonds for sanitary sewers and disposal plant; lately noted. (See Road and Street Work.)

Fla., Miami.—City votes Sept. 21 on \$50,000 bonds to pay city's share of cost of constructing sanitary sewers; B. H. Klyce, City Engr. (See Miscellaneous Construction.)

Fla., Ocala.—City invites bids until Sept. 14 to construct sanitary sewer system; 5788 ft. 6-in., 101,315 ft. 8-in., 8145 ft. 10-in., 2715 ft. 12-in., 5490 ft. 15-in. and 269 ft. 18-in. sewer pipe, 237 manholes, sewage-disposal system, 51 automatic flush tanks, etc.; J. B. McCrary Co., Engr., 1408-1417 Third National Bank Bldg., Atlanta, Ga.; H. C. Slstrunk, City Clerk. (See Machinery Wanted—Sewer Construction.)

Ga., Atlanta.—City votes Sept. 30 on \$3,358,000 bonds for municipal improvements as fol-

lows: \$1,000,000 for sewers and disposal plants; \$750,000 for water-works improvements; \$1,000,000 for schools; \$133,000 for motorizing fire department; \$100,000 for cyclorama building; \$375,000 for Grady Hospital; R. M. Clayton, Ch. of Constr. (Lately noted.)

La., Amite.—City engaged Xavier A. Kramer of Magnolia, Miss., and M. L. Culley of Jackson, Miss., to make original survey and furnish blueprints for sewer system and water-works.

Md., Baltimore.—City let contract Ryan & Reilly, 612 Union Trust Bldg., at \$96,482.40 to construct lateral sewers and house connections in Dist. No. 45, Contract No. 158; 43,000 lin. ft. 8 to 12-in. sewers and 37,000 lin. ft. house connections. (Call for bids lately noted.)

Md., Betterton.—City will construct sewer system and disposal plant. Address The Mayor.

Md., College Park.—Maryland Agricultural College will construct sewage-disposal plant.

Md., Chestertown.—City will construct lateral sewer extension. Address The Mayor.

Md., Delmar.—City contemplates construction sewerage system and disposal plant. Address The Mayor.

Md., Ocean City.—City let contract Boyle-Lohmuller Contracting Co., Calvert Bldg., Baltimore, at \$14,257 to construct intercepting sewers, branch sewers, sewage pumping station and clarification tank; Pugh & Hubbard, Engrs., 731 Witherspoon Bldg., Philadelphia, Pa.; J. M. Mumford, Secy. of Council. (Call for bids lately noted.)

Md., Preston.—City will construct lateral sewer extensions. Address The Mayor.

Md., Rockville.—Montgomery County Commissioners are having plans and specifications prepared for sewer system and disposal plant in Little Falls Branch drainage area; estimated cost \$125,000.

Md., Silver Spring.—Montgomery County Comrs. contemplate installation of sewerage system.

Md., Tacoma Park.—City will construct lateral sewer extensions. Address Ben G. Davis.

Md., Towson.—Maryland State Normal School will construct sewage-disposal plant.

Md., Towson.—Baltimore County Comrs. contemplate construction of sewerage system and disposal plant; estimated cost \$40,000.

N. C., Apex.—City granted franchise Municipal Service Corp. to construct and operate sewer system, water-works and electric-light plant.

N. C., Salisbury.—City voted \$20,000 bonds for sewers and street improvements. Address The Mayor.

Okla., Bartlesville.—City, C. A. Lamm, Mayor, contemplates construction of storm sewers; reinforced concrete and pipe; cost \$30,000.

Okla., Tulsa.—City will construct storm sewer system, with necessary catch-basins, manholes, etc., for draining section of Main St.; City Comrs. receive bids until Aug. 16; E. B. Cline, City Auditor. (See Machinery Wanted—Sewer Construction.)

Va., Richmond.—City will enlarge certain sewers; bids until Aug. 10; Chas. E. Bolling, City Engr. (See Machinery Wanted—Sewer Construction.)

W. Va., Parkersburg.—City will construct 8-in. sanitary sewers, including Y branches, manholes, house connections, etc., on Liberty, 23d and Lee Sts. and Clement Ave.; bids until Aug. 18; Frank Good, City Clerk. (See Machinery Wanted—Sewer Construction.)

W. Va., Philippi.—City voted \$20,000 sewer, light and paving bonds. Address The Mayor.

TELEPHONE SYSTEMS

Fla., Sanford.—Southern Bell Telephone & Telegraph Co. (main office, Atlanta, Ga.) purchased Sanford Telephone Co.'s system and will improve; expend \$40,000 for purchase and improvement.

Tenn., Christiansburg.—Christiana Telephone Co., capital \$1000, incptd. by H. H. Clark, A. N. Miller, N. D. Ellis and others.

TEXTILE MILLS

Ala., Athens.—Cotton Products.—Fulton Cotton Mills will add 2 spinning frames for coarse numbers, 1 intermediate frame and 2 camless winders; has awarded contract.

Ala., Birmingham.—Print Cloths.—Avondale Mills' recently noted installation spinning and cardroom machinery replaces old equipment; cost about \$125,000; has awarded all contracts.

Ky., Danville.—Knit Goods.—C. C. Bagby, Nelson D. Rodes, Harry Pushin and others are promoting establishment of knitting mill.

Ky., Louisville.—Knit Goods.—Neville Bullitt, Keller Bldg., plans to establish knitting mill.

Ky., Maysville.—Cotton Cloth.—Maysville Cotton Mills let building contract to Harding & Simonds, Maysville. (Lately noted to erect addition, reconstruct dyehouse, etc.)

N. C., Asheboro.—Hosiery.—Acme Hosiery Mills (lately reported to double plant) has let contract for 2-story 100x60-ft. brick building costing \$8000 to \$10,000; ordered 100 knitting machines, etc., costing \$25,000; double present daily capacity of 1000 doz. pairs hosiery. (See Machinery Wanted—Electric Motors.)

N. C., Charlotte.—Cotton Goods.—Robinson Mfg. Co. will install 4000 spindles, etc.; J. H. Mayes of Charlotte has contract for this equipment.

N. C., Edenton.—Cotton Yarn.—Edenton Cotton Mills will build addition; brick mill construction; cost \$30,000; install 10,000 spindles, 500 H. P. electric-drive equipment, etc., costing \$100,000; has not determined details.

N. C., Jonesboro.—Knit Goods.—J. W. Clark advises is not interested to establish knitting mill. (John Clark lately noted as planning establishment of mill.)

S. C., Anderson.—Asbestos Yarns.—Conneross Yarn Mill will install additional machinery and change present equipment so as to manufacture asbestos yarn.

S. C., Blacksburg.—Cotton Goods.—Broad River Mills contemplates increase of capital and addition of 10,000 spindles.

Tenn., Humboldt.—Cotton Goods.—Humboldt Cotton Mills increased capital from \$100,000 to \$200,000.

W. Va., Charleston.—Cotton Bags.—Royal Mills plans to install 100 additional machines to manufacture seamless cotton bags.

WATER-POWER DEVELOPMENTS

Tex., San Antonio.—City, Clinton G. Brown, Mayor, will utilize a formerly-used canal and power-house building for lately-noted construction; will install turbine and generator; install about 2 mi. transmission lines through Brackenridge Park for lighting; also about ½ mi. power transmission line for driving motor; develop 50 K. W. on 7½-ft. head; bids not yet advertised; C. H. Kearney, Commr. of Streets and Public Improvements, Engr. in charge.

Va., Roanoke.—Botetourt Water Power Co., capital \$500, incptd.; J. W. Hancock, Pres.; H. D. Vickers, Secy.-Treas.

W. Va., Charleston.—Paul Egan, Archt., will be consulting architect for company proposing to construct hydro-electric plant; company will soon select chief engineer; architect wants information on power-house construction. (See Machinery Wanted—Power-house Construction.)

WATER-WORKS

Ala., Russellville.—Sloss-Sheffield Steel & Iron Co., Birmingham, will provide additional water for brown-ore washers, construct concrete spillway for dam, raise dam now 3 ft. high and 1000 ft. long, etc. (See Mining.)

Ark., Arkadelphia.—Arkansas Light & Power Co. will build \$75,000 filter on Ouachita River.

Ark., Sparkman.—City contemplates constructing water-works. Address The Mayor.

Ark., Walnut Ridge.—City Council passed ordinance creating Water-Works and Sewerage Dist. No. 1; estimated cost \$60,000; W. E. Beloate, W. M. Ponder and W. E. Lane appointed Comrs.

Fla., Dunedin.—City, Walter Bull, Mayor, will vote Sept. 14 on \$6100 bonds for water-distribution system; lately noted. (See Road and Street Work.)

Fla., Salerno.—R. W. Mulford and others are reported to incorporate \$200,000 company to construct water-works, electric-light plant, etc.

Fla., Tarpon Springs.—City let contracts to furnish equipment for pumping station to cost \$7500; estimated cost, including building, \$10,000. Address The Mayor.

Ga., Atlanta.—City votes Sept. 30 on \$750,000 bonds for water-works improvements. R. M. Clayton, Ch. of Construction. (Lately noted.)

Ky., Shelbyville.—Kentucky Utilities Co. let contract Continental Jewel Filtration Co. of New York to install filter plant to cost \$15,000.

La., Amite.—City engaged Xavier A. Kramer of Magnolia, Miss., and M. L. Culley of

Jackson, Miss., to make original survey and furnish blueprints for water-works and sewer system.

La., Gretna.—Frank T. Payne, City Engr., prepared plans and specifications for water-works system estimated to cost \$45,000; will connect with municipal system of Algiers. (Lately noted.)

Md., Annapolis.—Annapolis Water Co. will install liquid chlorine plant. (Previously noted.)

Md., Baltimore.—City let contract Westinghouse Electric & Mfg. Co., Pittsburgh, Pa., at \$12,538 to furnish and erect 20,000-gal. centrifugal pump for Eastern Pumping Station of Water Dept. (Call for bids lately noted.)

Md., Bloomington.—Piedmont Water-works will install liquid chlorine plant.

Md., Chestertown.—City will extend water distribution system. Address The Mayor.

Md., Silver Spring.—Montgomery County Comrs. contemplate installation water-works.

Miss., Vicksburg.—City has added 9½ mi. extensions to plant noted purchased in April and made other improvements; contemplates installing additional low-lift unit at pumping plant; A. U. Paxton, City Clerk.

N. C., Apex.—City granted franchise Municipal Service Corp. to construct and operate water-works, electric-light plant and sewer system.

N. C., Lumberton.—City, A. E. White, Mayor, contemplates water-works and electric-light-plant improvements to cost \$25,000; Gilbert C. White, Consult. Engr., Charlotte, N. C.

N. C., Salisbury.—City voted \$125,000 bonds to build water plant at north fork of Yadkin River. Address The Mayor. (Lately noted.)

Okla., Grove.—City voted Aug. 9 on \$10,000 bonds, part of proceeds to be expended to extend water system. Address The Mayor.

Okla., Kusa (not a postoffice).—Kusa Water & Light Co., capital \$10,000, incptd. by John F. Goshorn of Dewar, Okla.; Geo. E. Nicholson of Kansas City, Mo., and Frank C. Nicholson of Iola, Kans.

Tenn., South Fulton, P. O. at Fulton.—City votes Sept. 4 on \$500 bonds to construct water-works. Address The Mayor.

Tex., Beeville.—City is considering construction of water-works. Address The Mayor.

Tex., Mineral Wells.—City defeated proposition to purchase Lake Pinto as source of water supply and defeated \$74,000 bond issue to construct water-works. (Lately noted.)

Va., Emporia.—City let contract to Laurence M. McCullough, Boydton, Va., for aqueduct construction.

Va., Fink.—Norfolk & Western Ry. let contract Southwestern Engineering Co., 6th and Shelby Sts., Bristol, for electrification of pumping station at Fink; equipment is designed to deliver 172,800 gals. water daily and to be operated by electric power furnished by St. Paul Light & Power Co., St. Paul, Va.; remote electrical control apparatus is being built by Southwestern company to allow of operation and control of pumps at distance of one-half mi. as it is proposed to control motors which operate pumps from power plant at St. Paul.

Va., Norfolk.—City invites bids until Aug. 13 for laying water mains, setting hydrants, valves, etc., on various streets; bids until Aug. 13; W. H. Taylor, Jr., City Engr. (See Machinery Wanted—Water System.)

Va., Orange.—City votes Aug. 31 on \$10,000 bonds to increase water supply and improve streets. Address The Mayor.

W. Va., Piedmont.—City contemplates \$85,000 bond issue to acquire water-works and pay indebtedness. Address The Mayor.

WOODWORKING PLANTS

Md., Hagerstown.—Building Supplies.—John Chaplin leased old Hager mill property and will equip to manufacture building supplies which have been chemically treated; machinery ordered.

N. C., Oxford.—Golf Clubs, etc.—H. M. Shaw (Propr. Oxford Brick and Tile Works) contemplates manufacture of golf clubs and other hardwood sporting goods, gun stocks, etc.; intends to partly manufacture, then sell to factories for finishing and marketing.

S. C., Columbia.—Veneer, etc.—Carolina Veneer Co. of Biltmore, N. C., will build plant to manufacture veneer, table tops, panel and thin lumber; estimated cost \$50,000.

Va., West Point.—Furniture.—West Point Furniture Co. will be name of company lately noted to be incorporated as York Furniture Co.; capital \$50,000; Crosby Thompson, Pres.; J. A. Booth, Lenoir, N. C., V. P. and Gen. Mgr.; F. C. Byron, Secy. Treas.; will erect \$15,000 frame construction buildings; manufacture medium and high-grade furniture.

FIRE DAMAGE

Ala., Bessemer.—Wm. H. H. Judson's residence; loss \$20,000.

Ark., Portland.—Brick buildings of E. J. Camak and Pugh Mercantile Co.

Fla., Jacksonville.—Dwellings at Springfield owned by Mrs. A. L. Love, H. A. Moore, H. H. Simmons (2) and Edward Silvania.

Ga., Atlanta.—Building owned by E. R. Black and occupied by Bombayreed Mfg. & Importing Co., Warner Plumbing & Heating Co., Alfred Dry Cleaning Co., Beckham Auto Tire Co. and Henderson Motorcycle Agency; estimated loss \$10,000.

Ga., Ochlocknee.—Perry store building, operated by Geo. W. Reagan; icehouse and beef market of J. S. Pinson, and other buildings.

Ky., Erlanger.—Will Davis' residence in South Erlanger.

Ky., Princeton.—Rowl's Tobacco Factory.

La., New Orleans.—W. W. Carre Lumber Co.'s mill department; estimated loss \$30,000.

Md., Baltimore.—Theodore Hart's dwelling at 5525 Penhurst Ave., West Arlington; loss \$4000.

Md., Brooklyn.—Louis Grieneisen's store and United States postoffice; loss about \$25,000.

Md., Easton.—Herbert J. Cox's bakery.

N. C., Bennett.—Flour mill owned by Scott Bros. and others; loss \$5000 to \$6000.

N. C., Bonlee.—Bennett Milling Co.'s plant; estimated loss \$8700.

N. C., Bridgeton.—S. D. Parker's dry goods store; C. C. Lee's building, occupied by Fred Mazingo; C. P. Fulcher's store; Dr. B. B. Smith's building; Tingle Bros.' store, and store occupied by J. H. Ogelsby; total loss about \$22,000.

N. C., Broadway.—Marks Bros.' gin; loss \$1000 to \$1500.

N. C., Franklin.—Frank Moody's dwelling, about 4 mi. from Franklin; loss \$8000.

S. C., Gaffney.—Mrs. M. B. Smith's dwelling in Macedonia section of county.

N. C., Greenville.—Greenville Cooperage Co.'s boiler-house.

Okla., West Tulsa.—Tulsa Boiler Mfg. Co.'s plant; estimated loss \$75,000.

S. C., Spartanburg.—Woodruff Cotton Mill Co.'s cotton warehouse not burned as reported in July.

Tenn., Bolivar.—John V. Wright's sporting goods factory; estimated loss \$5000.

Tenn., Chattanooga.—J. H. Whitaker Shoe Co.'s store and stock; loss on building \$8000.

Tenn., Gibson.—E. L. Parker's dwelling.

Tenn., Morrison.—Dwelling of M. H. Yates near Morrison.

Tenn., Nashville.—Solomon Bros.' clothing store; loss \$30,000.

Tex., Houston.—Dwelling at 206 3d St., Houston Heights, of Max Vieweger, temporary address, 510 Harvard St.; loss about \$15,000.

Tex., Hooks.—J. H. Wilder's brick building; loss \$3500.

Tex., Houston.—Rev. Thornton A. Payne's bungalow in Brooksmith Addition.

Tex., Mexia.—W. L. Milburn's dwelling.

Tex., Mineola.—L. F. Hamilton's residence; loss about \$4000.

Tex., Mount Calm.—Kirkland estate's building, loss \$2500; building of B. H. Oates, Waco, Tex., loss \$2500.

Tex., Orange.—Lutcher & Moore Lumber Co.'s planer and sawmill; loss \$150,000.

Tex., Terrell.—J. F. Smith's gin; loss \$8000.

Tex., Vernon.—A. P. Parker's dwelling; loss about \$6000.

Tex., Wills Point.—Dr. E. J. Gee's residence; loss \$7500.

Va., Leesburg.—Tyler Maffett's ice plant.

Va., Suffolk.—J. S. Brinkley Lumber Co.'s boiler-house; estimated loss \$1000.

W. Va., Marlinton.—C. J. Richardson's 4 buildings; loss about \$3200.

Va., Keysville.—Episcopal church (address The Pastor); Murry Hotel; Hangmer's warehouse.

W. Va., Washington.—C. J. Richardson's 4 buildings, loss \$5500; building of H. Kelmsm, loss \$13,000; buildings of D. R. Blake, Edward Wood and D. M. Faulkner.

DAMAGED BY STORM

Va., Richmond.—T. W. Wood & Son's warehouse on 14th St.; loss \$10,000.

Va., Stony Creek.—Methodist Episcopal church. Address The Pastor.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ga., Atlanta.—A. N. Canton will erect apartment-house.

Mo., St. Louis.—A. J. McGowan will erect 2-story tenement-house; cost \$5000; construction by owner.

Mo., Kansas City.—C. O. Jones will erect 6-apartment brick building at 2504-06 E. 28th St. to cost \$15,500 and 6-apartment brick building at 4217-19 Locust St. to cost \$16,000.

Mo., Kansas City.—J. E. Pence will erect brick apartment-house at 1308-16 Benton Blvd.; 6 apartments; cost \$15,000.

Mo., St. Louis.—W. B. Shelp will erect 3-story tenement at 5938 Kingsbury Blvd.; cost \$12,000; construction by owner.

Mo., St. Louis.—F. J. Cornwell will erect 2 apartment-houses at 5756 and 5762 Kingsbury Blvd.; each to contain 6 apartments of 5 rooms, sun parlor and bath; each site 65x150 ft.; total cost about \$40,000.

Mo., St. Louis.—Sam G. Stahlhuth will erect store and flat building on Easton Ave. east of Burd Ave.

Tex., San Antonio.—L. Lobert has plans for apartment and business building. (See Stores.)

Va., Charlottesville.—P. M. Faulconer and E. W. Hardesty purchased building on Mill St. and will remodel, converting second floor into 3 apartments.

Va., Newport News.—W. T. Chapin opens bids in office of H. W. Simpson, Archt., Aug. 13 to erect apartment-house; 40x79 ft.; 6 apartments of 6 rooms and bath each; brick.

Va., Richmond.—Milton J. Strauss will erect four brick flats at 27 W. Jackson St.; cost \$3470.

ASSOCIATION AND FRATERNAL

Ala., Ensley.—Steel City Lodge No. 150, Knights of Pythias, and Steel City Lodge No. 156, Woodmen of the World, will remodel and enlarge building; Geo. H. Younger is Chrmn. of Direc. of Fraternal Hall Assn.

Fla., Miami.—Fort Dallas Lodge, I. O. O. F., and Victor Encampment will erect lodge and store building at Ave. G and 8th St.; 70x30 ft.; 2 stories; frame; will later erect concrete-block building on same site.

Ga., Athens.—Young Men's Christian Association, Walter T. Forbes, Secy., is reported receiving bids to erect \$100,000 building.

La., New Orleans.—Y. M. C. A., Dr. A. O. Browne, Secy., will improve building; install steam-heating plant; floors in outdoor gymnasium; general repairs, etc.

S. C., Greenville.—Ingleside Assn. plans to erect home for working girls; Mrs. Chas. F. Hard in charge of purchasing site.

Tex., Dallas.—Labor Temple Building Assn. has revised sketches by Lang & Wittich, Dallas, for building at end of Young and Evergreen Sts.; 3 stories; brick; white tile trim; tile roof; stores on lower floor. (Noted in Mch.)

Tex., Pearsall.—Masonic lodge will erect building; cost about \$10,000.

Va., Norfolk.—Magnolia Camp, Woodmen of the World, contemplates issuing bonds to erect 4-story building on County St.

W. Va., Charleston.—Dr. A. H. Boyd opens bids to erect fraternal, bank and office building. (See Bank and Office.)

W. Va., Wellsburg.—Knights of Pythias and Independent Order of Odd Fellows are reported to erect building on Charles St.

W. Va., Wellsburg.—A. F. & A. M. are having plans prepared by M. L. Wells, Wellsburg, to erect store and lodge building; 3 stories; brick with stone trim; 69x100 ft.; reported bids may not be taken until next spring.

BANK AND OFFICE

Ark., Fulton.—J. J. Battle will erect bank and store building. (See Stores.)

Ky., Louisville.—Bankers' Realty Co. incorporated with \$55,000 to erect office building at 4th and Market Sts.; 5 stories; site 43.1x63.2 ft.; cost about \$75,000; \$75,000 preferred stock held by Inter-Southern Life Insurance Co., J. R. Duffin, Pres.

Okla., Drumright.—First National Bank is reported to erect bank building at Broadway and Ohio Ave.

S. C., Anderson.—G. H. Bailes will remodel store building on Main St. for office and depot of Piedmont & Northern Lines; ordinary and fireproof construction; maple floor; steam heat; electric light; cost \$5000; C. Gadsden Sayre, Archt., Anderson; construction by J. T. Masters & Son with day labor; contract for terra-cotta front to Atlanta Terra-Cotta Co., Atlanta, Ga. Address Mr. Bailes. (Noted in June to open bids in July.)

S. C., Saluda.—Bank of Saluda, B. W. Crouch, J. P. Lindler and G. C. Wheeler, Comm., are having plans prepared to erect bank and office building at Main and Church Sts.; 2 stories; pressed-brick front; fireproof vault; tile floor; plans ready about Aug. 10. (Lately noted.)

Va., Newport News.—Newport News Shipbuilding & Drydock Co. contemplates additional story to office building.

W. Va., Charleston.—Dr. A. H. Boyd opens bids Aug. 10 to erect lately noted bank, office and fraternal building at State and Capitol Sts.; 40x110 ft.; 3 stories; brick; composition roof on steel beams; wood floor; steam heat; cost about \$25,000; Paul Egan, Archt., Charleston. Address Owner. (See Machinery Wanted—Bank Fixtures.)

W. Va., Clatwood.—Dickenson County Bank is erecting bank and office building; 70x50 ft.; pressed brick; steam heat; cost \$20,000; H. M. Miller, Archt., Roanoke, Va.

CHURCHES

Ala., Birmingham.—Handley Memorial Church, C. T. Krauss, Chrmn. Building Comm., has plans by Clifford Evans, American Trust Bldg., Birmingham, for Sunday-school and temporary church building at 15th Ave. and 25th St. North; 60x40 ft.; brick veneer; concrete basement; composition shingle roof; wood joist floor; cost about \$10,000; about \$900 steam heating; electric light; bids opened Aug. 7. Address Mr. Krauss. (Lately noted.)

Ky., Lexington.—County Commrs. are reported to erect chapel at county infirmary.

Md., Mt. Airy.—M. E. Church, Rev. Chas. E. Ely, pastor, will erect building; about 60x90 ft.; stone; slate roof; steam heat; electric light. (Lately noted to cost about \$20,000.)

Miss., Ripley.—Baptist Church, W. R. Spight and Lee Cox, Comm., has plans by Jas. E. Greene, Birmingham, Ala., for building; cost \$5000. (Noted in May.)

Miss., Tylertown.—Baptist Church, Rev. J. B. Quinn, pastor, has plans by Jas. E. Greene, Birmingham, Ala., for building; cost \$7000. Address The Pastor.

Mo., Kansas City.—Bales Baptist Church has plans by Shepard, Farrar & Wiser, R. A. Long Bldg., Kansas City, to erect building at Twelfth St. and Bales Ave.; cost complete \$55,000.

N. C., Winston-Salem.—Zion A. M. E. Church has plans by Humphreys & Faw, Winston-Salem, for building 107x44 ft.; brick; asbestos shingle roof; warm-air heat; cost about \$11,000; plans ready for bids. (Noted in July.)

Okla., Eufaula.—Christian congregation has plans by John Lowe for building; 38x50 ft.; brick; Dr. Noblit, pastor.

Okla., Muskogee.—Calvary Baptist Church will erect addition to main auditorium and Sunday-school room at R and Cincinnati

Sts.; 40x60 ft.; frame; shingle roof; electric light; granite walk. Address W. B. Judan.

Okla., Okeene.—Christian congregation, W. B. Young, Chrmn. of Trustees, will erect building.

Tex., Fort Worth.—Agudah Achim congregation was incorporated by M. Ginsberg, M. Borschow, S. Breacher and A. Levine; will erect temporary building to cost \$5000.

Va., Norfolk.—Algonquin Park Episcopal Church contemplates erecting building. Address The Pastor.

W. Va., Ridgely.—Calvary M. E. Church, Rev. W. W. White, Pastor, will erect building; cost \$6000.

CITY AND COUNTY

Fla., Miami.—Jail and Courthouse.—Dade County Commrs. will remodel courthouse, using 4th floor for jail. (See Courthouses.)

Ga., Atlanta.—Cyclorama Building.—City votes Sept. 30 on bond issue to include \$100,000 for cyclorama building. (See Schools.)

Ga., Savannah.—Auditorium.—City selected site on Barnard St. between Hull and Perry Sts. for auditorium, for which \$200,000 bonds were voted; site 185x195 ft.; H. W. Witcover, Archt., Savannah. (Noted in Dec., 1914.)

Ky., Lexington.—Infirmary.—County Commrs. are reported to erect chapel at county infirmary.

Mo., Jefferson City.—Jail.—Cole county votes Oct. 10 on \$25,000 bonds to erect jail and \$25,000 bonds to erect tuberculosis hospital. Address County Commrs. (Noted in July.)

Okla., Checotah.—City Hall, Fire Station and Jail.—City voted \$20,000 bonds to erect city hall, fire station and jail. Address The Mayor.

Tenn., Nashville.—Asylum.—Davidson County Asylum Com., John F. Gaffney, Chrmn., 333 Fourth Ave. North, Nashville, rejected bids to erect 2 wings to county asylum; receives new bids until Aug. 14; bids to be taken for work as whole; has appropriation of \$75,000; Edward E. Dougherty, Archt., Candler Bldg., Atlanta. (Noted in June.)

Tex., San Marcos.—City Hall and Fire Station.—T. C. Johnson, Jr., City Secy., receives bids until Aug. 19 to erect complete except plumbing, sewerage, heating and electrical works) city hall and fire station; fireproof; reinforced concrete; brick veneered; 56x70 ft.; 2 stories; stone trimmings; steam heat; water-works; electric fixtures; cost about \$20,000; plans and specifications at office of Roy L. Thomas, Archt., 512 Scarborough Bldg., Austin. (Noted in July.)

Okla., Collinsville.—Library.—City Commrs. will erect Carnegie library; cost \$7500.

Tex., Cisco.—City Hall.—City, J. M. Williams, Mayor, opens bids about Sept. 1 to erect city hall at 7th Ave. and E St.; 40x60 ft.; fireproof; natural-gas heat; electric light; other details undecided; cost about \$12,000. (Noted in July.)

Tex., Tahoka.—Courthouse and Jail.—Lynn county voted bonds to erect courthouse and jail. (See Courthouses.)

Va., Staunton.—Jail.—County Supvrs. and City engaged T. J. Collins & Son, Staunton, to prepare plans to remodel jail; will consider sketches Aug. 27; cost about \$3000. (Lately noted.)

COURTHOUSES

Fla., Fort Lauderdale.—Broward County Commrs., A. B. Lowe, Chrmn., plan to purchase school building and convert into courthouse; cost of improvements about \$4000.

Fla., Hastings.—St. Johns County Commrs. contemplate erecting courthouse; I. I. Moody, Chrmn.

Fla., Miami.—Dade County Commrs., S. J. Belcher, Chrmn., will remodel courthouse, making structure 4 stories and use 4th floor for jail; instructed Frohling & DeGarmo, Miami, to prepare plans; other architects may submit sketches, information to be supplied by Mr. Belcher; contemplate concrete construction; cost about \$100,000. (Lately noted to levy tax to build jail.)

Fla., St. Augustine.—County Commrs. contemplate erecting courthouse; plans not definite.

N. C., Newbern.—Craven County Commrs., C. D. Brodhaus, Chrmn.; S. H. Fowler, Clerk, receive and open bids Sept. 6 to erect addition to courthouse; addition to be 40 ft. long; construction, roof, windows, etc., to harmonize with present building; retiring rooms in basement; Clerk of Court and Reg.

later's offices on first floor, with corridor extending full length; stairway in rear; 3 jury-rooms, toilets, detention-room on second floor connected to jail by bridge; plans and specifications may be had from Robt. F. Smallwood, Archt., Newbern. (Noted in July.)

Tex., Tahoka.—Lynn county voted bonds to erect 3-story fireproof courthouse and jail; cost \$91,000. Address County Commrs. (Noted in July.)

W. Va., Madison.—Elmer Nelson, Clerk of Boone County Court, receives bids until Aug. 21 (extended date) to erect courthouse; bids considered either for building as a whole or for completion of outside work and inside work separately; plans and specifications at office of H. Rus Warne, Archt., Charleston, W. Va. (Noted in July.)

DWELLINGS

Ala., Birmingham.—M. Porter will erect 2-story brick-veneer building at Milner Heights, south; cost \$5000.

Ala., Birmingham.—C. M. Williamson will erect dwelling on Hanover Circle; 7 rooms; brick veneer; composition shingle roof; hot-air heat; cost about \$5000. (Lately noted under Stores.)

D. C., Washington.—Mrs. Delos A. Blodgett will remodel residence at 1509 16th St. N. W.

D. C., Washington.—Middaugh & Shannon, 1009 Woodward Bldg., will erect 8 dwellings at 1417-31 Illinois Ave. N. W.; cost \$33,000; plans and construction by owners.

D. C., Washington.—D. J. Dunigan, 230 Bond Bldg., will erect 3 dwellings on California St. between 23d and 24th Sts.

D. C., Washington.—J. V. McKenzie, 1513 Meridian Pl., will erect dwelling at 3307 Northampton St. N. W.; cost \$4000; David L. Stern, Archt., 1315 Columbia Rd. N. W., Washington.

D. C., Washington.—Kennedy Bros., 1334 H St. N. W., have plans by A. H. Sonnenmann, same address, for 4 dwellings at 1839-6 Irving St.; 2 stories; brick; cost \$9600; construction by owners.

D. C., Washington.—Harry A. Kite, 1338 G St. N. W., has plans by Clarke Waggoner, 1124 Connecticut Ave., Washington, for 3 dwellings at 1715-19 19th St. N. W.; brick; cost \$60,000; construction by owner.

D. C., Washington.—Alexander Miller, 3640 New Hampshire Ave. N. W., will erect 2 dwellings at 3922-4 Morrison St. N. W.; 2 stories; hollow tile; Jas. Miller, Archt., 3642 New Hampshire Ave. N. W., Washington, Archt.; construction by owner.

D. C., Washington.—E. H. Gottwals has plans by J. W. Powell, 628 6th St. N. E., Washington, for 3 dwellings at 1822-24 Irving St. N. W.; cost \$6500; construction by owner.

Fla., Orlando.—L. D. Long will erect dwelling on Colonial Drive, Colonial Hills; 28x46 ft.; mill construction; composition roof; gas heat; \$100 electric light; cost \$3000; plans and construction by owner with day labor; construction begun.

Fla., Yalaha.—W. J. Howey, Chicago, is reported to erect hotel and number of dwellings. (See Hotels.)

Fla., Tampa.—Mrs. Potter Palmer, Chicago, is reported having plans prepared by A. H. Johnson, Tampa, to erect bungalow; cost \$4000.

Ga., Atlanta.—West Lumber Co. will erect 2 frame dwellings on W. 14th St.; cost \$5000; day labor.

Ga., Atlanta.—S. R. Crawford has plans by Lella Ross Wilburn, 305 Peters Bldg., Atlanta, for 2 bungalows; each 1 story; 6 rooms; frame; one to have stone foundation, other press brick; hardwood, tile and cement floors; furnace heat; total cost \$5250.

Ga., Macon.—Jos. Travers is having plans prepared by Curran Ellis, Macon, to erect 2 frame dwellings on Oak St.; bids being received.

Ga., Senola.—Mrs. Alice C. Fall will erect 2 bungalows.

Ky., Lexington.—W. L. Petty purchased site at Main St. and Ashland Ave., 108x125 ft., and will erect residence.

Ky., Louisville.—Harry Cohen will erect brick dwelling at 1439 S. 2d St.; cost \$5000.

La., New Orleans.—Dr. T. E. Allen, 3332 Washington St., will erect store and dwelling; cost \$5000; construction by owner.

La., New Orleans.—J. C. Yochim has plans by F. L. Goodwin, New Orleans, for dwelling; 2 stories; frame.

La., New Orleans.—Louisiana Building & Construction Co. will erect dwelling at Elk and Vincent Sts.; 1 story; frame; slate

roof; hardwood and pine floor; cost \$3300; construction by owner. (Noted in July.)

La., New Orleans.—Security Building and Loan Assn. has plans by Jones & Roessle, New Orleans, for dwelling; 2 stories; frame.

La., New Orleans.—Realty Assets Co. has plans by T. L. and J. D. Young, New Orleans, for frame dwelling.

La., New Orleans.—M. J. Sangassan has plans for dwelling; frame; slate roof; warm-air heat.

La., New Orleans.—Interstate Land Co. has plans by E. B. Mason, New Orleans, for dwelling.

La., New Orleans.—W. R. Gilbert will erect 2 dwellings on Peters Ave.; also considering contract for another dwelling to cost \$7000.

La., Oberlin.—Dr. T. R. Sartar contemplates letting contract to erect \$3000 dwelling.

La., Oberlin.—M. McKinney will ask bids for Aug. 16 to erect dwelling; cost about \$2500.

Md., Baltimore.—F. E. Beall, 396 St. Paul St., Baltimore, is preparing plans for about 25 dwellings in West Forest Park; 25½x20 ft.; 2½ stories; frame; stucco; probably hardwood floor; hot-water or steam heat; electric light; cost about \$100,000.

Md., Baltimore.—Robt. W. Flower, 1209 E. North Ave., will erect dwelling on Register Ave.; 26x40 ft.; bungalow type; frame; shingle exterior and roof; concrete foundation cost about \$3000; construction by owner.

Md., Baltimore.—Frank Novak Realty Co., 744 N. Kenwood Ave., Baltimore, will erect 13 dwellings at 2404-28 N. Washington St.; 2 stories; 2 15.6x45 ft.; 11 14.1x45 ft.; ornamental brick; stone trim; cost \$13,000; plans and construction by owner.

Md., Baltimore.—Dr. Lewelys F. Barker has tentative sketches by E. L. Palmer, Jr., 408 Roland Ave., Roland Park, Md., for dwelling in Guilford.

Md., Baltimore.—C. Stanley Sterling has plans by Walter M. Gieske, 65 Gunther Bldg., Baltimore, for 14 dwellings at Park Heights Ave. and Oakleigh St.; 2 stories; 14.10x57.3 ft.; brick; slag and tin roof; hardwood and pine floor; low-pressure steam heat; electric light; bids due Aug. 11.

Md., Baltimore.—Park Circle Construction Co., Park Heights Ave. and Reisterstown Rd., has plans by J. P. Townsend, same address, for 10 dwellings in 3400 block Park Heights Ave.; 2 stories; 22x36 ft.; brick; tile roof; pine floor; steam heat; electric light; cost \$28,000; construction by owner.

Md., Harford County.—R. A. Fisher opens bids Aug. 11 to erect addition to and remodel dwelling; interior remodeling; addition stone and frame; cost about \$5500; Bayard Turnbull, Archt., 324 N. Charles St., Baltimore. (Noted in July.)

Mo., Fayette.—Harry White will erect dwelling about 4 mi. northeast of Fayette.

Mo., Kansas City.—Frederick Altergott will erect 2-story brick and stone residence at 1020 Westover Rd.; cost \$30,000.

Mo., Kansas City.—H. F. Hill will erect two 2-story frame dwellings at 521-23 Woodland Ave.; cost \$3000 each.

Mo., Kansas City.—C. O. La Rue will erect brick residence at Fifty-seventh St. Terrace and Bellevue Ave.; cost \$20,000.

Mo., Kansas City.—J. A. Webb of Webb Bros. Belting Co. will erect residence in Mission Hills; white clapboard with red brick trim; colonial type; 10 rooms; interior woodwork finished in white enamel; cost \$10,000; garage to be built under porch.

Mo., Kansas City.—Alice G. Jackson will erect 2-story frame dwelling at 3820 Virginia Ave.; cost \$5000.

Mo., Kansas City.—Chas. Egbert will erect 2-story frame dwelling at 17 W. 37th St.; cost \$5000.

Mo., Kansas City.—Lee Agee will erect 2 two-story frame dwellings at 126 Brunt Blvd. and 1115-17 W. 38th St.; cost \$6000 each.

Mo., Kansas City.—M. F. Wolfe will erect 1-story frame dwelling at 7422 Summit St.; cost \$5000.

Mo., St. Charles.—Geo. Barklage of Ring-Barklage Hardware Co. will erect dwelling at Kingshighway and Adams St.

N. C., Asheville.—Mrs. Michael Lutz plans to erect Swiss chalet in Albemarle Park.

N. C., Asheville.—W. M. Burckel will erect 9-room dwelling on Grand Ave.; cost about \$4000.

N. C., Asheville.—S. M. Stevens plans to erect dwelling on Victoria Place.

N. C., Belmont.—Mrs. W. R. Stowe has plans by Lella Ross Wilburn, 305 Peters

Bldg., Atlanta, to erect dwelling; 1½ stories; frame; 8 rooms; electric lights; cost \$3000.

N. C., Greensboro.—W. L. Carter is having plans prepared by R. J. Hughes for dwelling; 2 stories; hollow tile and brick veneer; vapor heat; cost about \$8000; plans ready Sept. 1.

N. C., Rockingham.—R. F. Reynolds has plans by Lella Ross Wilburn, 305 Peters Bldg., Atlanta, to erect residence; 2 stories; frame; 9 rooms; electric lighting; hardwood floors; cost \$4000.

N. C., Winston-Salem.—E. H. Wilson is having plans prepared by Humphreys & Faw, Winston-Salem, for dwelling; 2 stories; 8 rooms; frame; cost about \$4000; plans ready Aug. 15.

N. C., Winston-Salem.—Dr. H. H. Kapp has plans by Humphreys & Faw, Winston-Salem, for dwelling; 2 stories; 12 rooms; brick veneer or stone; asbestos shingle roof; hot-water heat; cost about \$10,000.

Okla., Vinita.—John A. Wise plans to erect 2 or 3 dwellings.

S. C., Rock Hill.—Mrs. R. L. Holroyd will erect dwelling on Hampton St.

Tex., Austin.—J. B. Robertson will erect 2-story dwelling in Aldridge Pl.; hollow tile and stucco; cost \$250.

Tex., Columbus.—H. Lawless will erect dwelling.

Tex., Corsicana.—J. M. Weaver is having plans prepared by Horne & Blanding for cottage at W. 2d and N. 12th Sts.

Tex., Dallas.—Dr. J. B. Shelmire will erect residence; hollow tile; oak floors; hot-air heat; cost \$10,000.

Tex., El Paso.—A. W. Bittick is having plans prepared by O. H. Thorman & Co., El Paso, for dwelling at Bliss and San Marcial Sts.; bungalow type; 5 rooms; cost \$4500.

Tex., El Paso.—Anderson-Filler Co. will erect brick bungalow in Pierce-Finley addition; 28x44x20 ft.; cost \$3000.

Tex., El Paso.—Dr. H. O. Darnell is having plans prepared by O. H. Thorman & Co., El Paso, for bungalow at Grant and Raynor Sts.; 5 rooms; cost \$4200.

Tex., El Paso.—O. H. Thorman & Co., El Paso, are preparing plans for dwelling at Kansas and Cliff Sts.; bungalow type; 5 rooms; cost \$5000.

Tex., Gatesville.—Trustee State Juvenile Training School will erect cottage and hospital building. (See Schools.)

Tex., Houston.—E. L. Crain will erect 2-story frame stucco 8-room dwelling at Herald and Connor Sts. in Montrose Addition; cost \$5000.

Tex., Houston.—G. C. Evans will erect 8-room dwelling at Oakdale and Austin Sts.; cost \$4500.

Tex., Houston.—J. L. Huxley, G. C. Evans and A. L. Hughes will erect 9-room dwelling at Oakdale and Austin Sts.; cost \$4500.

Tex., Houston.—Tom Randolph, Jr., will erect 7-room dwelling at Mt. Vernon and Westheimer Rd.; cost \$3500.

Tex., La Porte.—J. W. Canada will erect dwelling; 1 story; 28x50 ft.; tile brick; asbestos roof; construction begun.

Tex., Nacogdoches.—T. R. Gray has plans by D. Rulfs for residence; 72x36 ft.; face brick; metal shingle roof; tile in bathroom; owner is purchasing material; cost \$7500.

Tex., Nacogdoches.—L. B. Mast has plans by D. Rulfs for residence; brick veneer; metal shingle roof; tile for bathroom; owner is purchasing material; cost \$8000.

Tex., San Antonio.—H. C. Miller will erect 6-room dwelling on West Falls Ave.; cost \$3000.

Va., Roanoke.—Lawson Worrel, Bluefield, W. Va., is having plans prepared by H. M. Miller, Roanoke, Va., to erect dwelling on Grandon Rd., Raleigh court; rough-texture brick; cost \$10,000.

W. Va., Bluefield.—J. W. Overstreet is reported to erect dwelling on Lakeside Ave.

W. Va., Beech Glenn (not a P. O.).—Miss Ida Owens, care Geo. Ebeling, Archt., Wheeling, W. Va., is receiving bids to erect dwelling and garage; 2 stories; tile and stucco; cost \$5500.

W. Va., Bluefield.—Dr. Philip Kelly, Virgin, W. Va., is reported to erect residence on Lakeside Ave.

W. Va., Fairmont.—Mrs. Lulu Fox has plans by A. C. Lyons, Fairmont, to erect residence; 2 stories; brick; cost \$6000; bids invited about Aug. 15.

W. Va., Parkersburg.—Dr. L. O. Rose will erect residence on Murdoch Ave., Camden Riverview Terrace Addition.

GOVERNMENT AND STATE

D. C., Washington.—Laboratory.—Bureau of Standards, Dept. of Commerce and Labor, opened bids to erect laboratory; Wells Bros. & Co., 608 Riggs Bldg., Washington, low at \$211,000. (Details lately noted.)

Okla., Tulsa.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., opens bids Sept. 27 to erect postoffice, including mechanical equipment and approaches; 2 stories and basement; fireproof; stone-faced; 28,700 sq. ft. ground area; drawings and specifications to be had of Acting Supervising Archt. or custodian of site at Tulsa.

Tex., Corsicana.—Home.—State Board of Control is reported having plans prepared by Ernest E. McAnelly, Dallas, and C. H. Page & Bro., Austin, for dining hall, dormitory, pavilion, hospital, etc., at State Orphans' Home; reinforced steel; terra-cotta trimming; marble; tar and gravel roof; stone porch columns; steam heat; electric wiring; cost about \$80,000; lets contract in about 30 days.

HOSPITALS, SANITARIUMS, ETC.

D. C., Washington.—Wm. E. Barker has plans by Arthur B. Heaton, Wilkins Bldg., Washington, for nurses' home at Homeopathic Hospital; 4 stories; bidders include Boyle-Robertson Construction Co., 1516 H St. N. W.; Samuel J. Prescott, 814 13th St. N. W.; Richardson & Burgess, 1413 H St. N. W.; Frank L. Wagner, 1413 H St. N. W.; Davis Construction Co., 602 Union Trust Bldg.; all of Washington.

Fla., Miami.—City votes Sept. 21 on \$20,000 bonds to erect hospital; B. H. Klyce, City Engr.; lately noted. (See Miscellaneous Construction.)

Ga., Atlanta.—City votes Sept. 30 on bond issue to include \$375,000 for Grady Hospital. (See Schools.)

Ky., Frankfort.—King's Daughters Circle will erect addition to hospital.

Ky., Henderson.—Anti-Tuberculosis Commission for Henderson County, Sterling L. Marshall, Prest., engaged Harry E. Boyle, Evansville, Ind., to prepare plans for tuberculosis hospital; cost about \$25,000. (Lately noted to have engaged other architects.)

Mo., Jefferson City.—Cole county votes Oct. 10 on \$25,000 bonds to erect tuberculosis hospital. (See City and County.)

Tex., Carlsbad.—Ernest E. McAnelly, Dallas, is reported preparing plans for 2-story dormitory, dairy building, dining hall and cold-storage plant for Texas State Sanatorium; dormitory to be 2 stories and basement, with 40 rooms; reinforced steel; terra-cotta; tar and gravel roof; steam heat; electric and gas light; dumbwaiters.

Tex., El Paso.—Miss Elizabeth Kelly is having plans prepared by Gibson & Robertson, Herald Bldg., El Paso, for tuberculosis sanatorium in Altura Park; main building 2 stories, with 1-story wings; each wing to have roof garden; brick and tile construction; will contain 27 rooms and 24 sleeping porches; rooms to have connecting baths.

Tex., Gatesville.—Trustee State Juvenile Training School will erect hospital building and cottage. (See Schools.)

HOTELS

Fla., Yalaha.—W. J. Howey, Chicago, is reported to erect hotel and number of dwellings.

Ky., Paducah.—John W. Keller, owner of Palmer House, contemplates erecting 10-story steel addition; 300 rooms; cost about \$200,000.

Ky., Pikeville.—Geo. W. Gray, Propr., will erect 30-room brick addition to Jefferson Hotel.

La., Abita Springs.—L. A. Block is promoting Abita Hotel Co., capital stock \$50,000, to erect hotel, cottages, construct swimming pool, etc.; Chas. T. Starkey, Atty., 506 Godchaux Bldg., New Orleans.

Miss., West Point.—Hardy M. Burt and L. A. Stubblefield, Props., Hotel Florence, Birmingham, Ala., contemplate erecting hotel; plans indefinite. (Lately noted.)

Mo., Kansas City.—Smith, Rea & Lovitt, 602 Finance Bldg., Kansas City, are reported preparing plans for Hotel Rieger at 1922 Main St.; 3 stories; fireproof; cost about \$40,000.

Mo., Kansas City.—C. H. Kirshner will convert 2 buildings at 31st and Harrison Sts. into family hotel of 65 rooms; construction to begin in about 30 days; C. L. Bliss in charge.

Okla., Tahoka.—J. E. Stokes is reported to erect fireproof building for hotel.

Tenn., Paris.—Robert N. Fryer, Cincinnati, is reported to rebuild Maxwell House lately noted damaged by fire; loss \$5000 to \$6000.

Tex., Galveston.—Steve Sgiticovich and others have plans by C. D. Hill & Co., Galveston and Dallas, to erect hotel at Mechanic and 25th Sts.; Archts. wire Manufacturers Record: "85x129 ft.; 5 stories; reinforced concrete; terra-cotta trim and cornice; composition roof; freight and passenger elevators; steam heat; no power plant; estimated cost, 100,000." Reported foundation will be constructed to carry additional stories; expect to let contract about Sept. 15 and begin construction about Oct. 1.

MISCELLANEOUS

D. C., Washington.—Lunchroom.—Geo. B. Bryan will remodel lunchroom at 183 B St. S. E.; cost \$6200.

D. C., Washington.—Ballroom.—Thomas H. Pickford, The Toronto, will remodel ballroom at 16th and I Sts. N. W.; cost \$4000.

Ga., Augusta.—Home.—Mrs. Minnie Battle Allyn, Sharon, Ga., founded home for cripples and incurables of Georgia; will erect fireproof building to cost about \$1,000,000; details undecided; architect not selected; preliminary estimates being taken. Address Mrs. Allyn.

Mo., Dodson.—Clubhouse.—Hillcrest Country Club, W. M. Beebe, Pres., 1012 E. Armour Blvd., Kansas City, is reported to erect clubhouse; cost \$40,000. (Lately noted at Kansas City.)

Mo., Kansas City.—Clubhouse.—Hillcrest Country Club is having plans prepared by Keene & Simpson, Kansas City, for clubhouse at 81st St. and Hickman Mills Rd.; 40x200 ft.; frame and stucco; shingle roof; concrete and wood floor; steam heat; cost \$50,000; construction to begin soon. Address Archts. (Lately noted.)

N. C., Winston-Salem.—Home.—Mrs. W. M. Cundiff will erect memorial building at Methodist Children's Home to cost \$10,000.

Okla., Dewey.—Fair.—Washington County Free Fair will expend \$10,000 to erect buildings.

RAILWAY STATIONS, SHEDS, ETC.

Ga., Royston.—Southern Ry. Co., W. H. Wells, Ch. Engr. Construction, Washington, D. C., will erect depot; bids opened Aug. 10.

S. C., Anderson.—G. H. Bailes will erect building for depot of Piedmont & Northern Lines and offices. (See Bank and Offices.)

Va., Virso (not a postoffice).—Southern Ry., W. H. Wells, Ch. Engr. Constr., Washington, D. C.; Virginian Ry., Raymond Du Puy, V. P. and Gen. Mgr., Norfolk, Va., and Norfolk & Western Ry., J. E. Crawford, Ch. Engr., Roanoke, Va., are reported to erect station at Virso, Lunenburg county.

SCHOOLS

Ark., Garner.—Trustees will not erect school building as previously noted.

Fla., Brandon.—Hillsborough County Board of Public Instruction, Marshall Moore, Secy., Tampa, Fla., receives bids until Aug. 17 to erect school building on Knight St.; 2 stories; brick; 55x66 ft.; cedar-shingle roof; pine floor; cost about \$5000; plans and specifications may be obtained from D. F. Hagy, Archt., 3021 Citizens' Bank Bldg., Tampa. (Noted in July.)

Fla., Titusville.—Special Tax School Dist. No. 1, Brevard county, votes Sept. 14 (extended date) on \$100,000 bonds for school improvements; has plans by A. E. Lewis, Miami, for graded and high school; fireproof; cost \$65,000. (Noted in July.)

Ga., Atlanta.—Board of Education is reported to erect addition to Woodberry school building; cost \$5000.

Ga., Atlanta.—City votes Sept. 30 on \$3,358,000 bond issue to include \$1,000,000 for schools, \$375,000 for Grady Hospital and \$100,000 for Cyclorama building; schools and hospital issues lately noted. Address The Mayor. (See Sewer Construction.)

Ga., Cecil.—Trustees are reported to erect school building; Prof. Sankey Booth interested.

Ky., Louisville.—Board of Education will erect stadium at Louisville Boys' High School at Brock and Breckinridge Sts.; concrete; 15 tiers; cost about \$15,000. (Lately noted.)

La., New Roads.—School Board, A. McFarland, Secy., has plans by Favrot & Livaudais, Title Guarantee Bldg., New Orleans, for school building; 2 stories; frame; bids opened Aug. 11.

Md., Baltimore.—City opens bids Aug. 16 to repair 118 schools; cost \$100,000 in aggregate.

gate; plans and specifications to be had of Oscar J. Hook, Director Bureau Information and Complaints, City Hall.

Md., Baltimore.—City, Richard Gwinn, City Register, City Hall, receives bids until Aug. 18 to erect additional rooms on roof Western High School; drawings and specifications to be had of C. E. Stubbs, Building Inspector. (Contract lately noted rescinded.)

Md., Baltimore.—Johns Hopkins Medical School opens bids Aug. 12 to erect laboratory building at Madison and Wolfe Sts.; 50x110 ft.; 5 stories and basement; reinforced mushroom-type concrete frame; brick curtain walls; slab concrete floor; cost about \$110,000; Archer & Allen, Archts., Central Savings Bank Bldg., Baltimore; bidders are B. F. Bennett Building Co., 123 S. Howard St.; Edw. Brady & Son, 1113 Cathedral St.; Walter E. Burnham, Law Bldg.; John Hiltz & Sons, 3 Clay St.; Morrow Bros., Fidelity Bldg.; Chas. L. Stockhausen Co., National Marine Bank Bldg.; Henry Smith & Sons Co., German and Light Sts.; Willard E. Harn Co., 213 N. Calvert St.; John Walters, 23 E. Center St., all of Baltimore. (Noted in July.)

Md., Baltimore County.—Baltimore County Commrs., Towson, Md., have plans by Smith & May, 1133 Calvert Bldg., Baltimore, for school building on Cold Spring Lane near York Rd.; 2 stories; 12 classrooms; brick and concrete; slag roof; steam heat; Archts. taking bids; bidders are: Blake & Engle, Law Bldg.; H. A. Nagle, Edw. Brady & Son, 1113 Cathedral St.; W. E. Burnham, Law Bldg.; John Hiltz & Sons, 3 Clay St.; G. Walter Tovell, Eutaw and McCulloh Sts.; John Waters, 23 Center St.; Thos. B. Stanfield & Co., 212 Clay St.; all of Baltimore.

Mo., Rogersville.—City voted \$5700 school bonds. Address The Mayor.

N. C., Asheville.—County Commrs. will erect building at Buncombe County Industrial and Training School, Richard Penland, Supt., for dormitory, school and chapel; 2 stories; second floor for dormitory; chapel in rear.

N. C., Asheville.—City Commrs. called election for Nov. 2 on \$250,000 bonds or less, of which at least \$175,000 shall be expended to erect high-school building; remainder to be expended for campus of proposed school and for other school improvements. (Noted in June.)

N. C., Grover.—Grover School Dist. No. 24 votes Sept. 11 on \$5000 to \$6000 bonds to erect school building. Address County Board of Education, Shelby, N. C.

N. C., Durham.—County Board of Education will erect school building in Patrick Henry and Fowler Dist.; former to have 3 classrooms, library and auditorium; cost \$2500; latter to have 1 room and cost \$1000.

N. C., Greensboro.—City, T. J. Murphy, Mayor, has plans by W. L. Brewer, Greensboro, for school buildings on E. Bragg St. and E. Washington St.; frame construction; brick veneer; slate roof; steam heat; bids opened Aug. 10; separate bids on construction, heating and plumbing. (Noted in July.)

N. C., Maxton.—City is having plans prepared by C. Gadsden Sayre, Anderson, S. C., for school building; 9 classrooms and auditorium; brick; Barrett specification roof; stone trim; maple floor; electric light; slate blackboards; sanitary plumbing; playrooms and toilets in basement; cost about \$20,000; bids opened about Sept. 20.

Okla., Renfrow.—Board of Education receives bids Aug. 14 and opens bids about Sept. 1 to erect school; 49x52 ft.; brick; composition roof; hot-air heat. (Noted in July to call \$6000 bond election to erect school.)

Okla., Norman.—University of Oklahoma is having plans prepared by J. W. Hawk and J. O. Parr, Oklahoma City, Okla., under supervision of Dr. Edwin De Barr, head of Chemistry Dept. of University, for science hall; 4 stories and basement; 60x120 ft.; white stone, probably Bedford limestone; accommodations for 600 students; auditorium with 200 seating capacity on first floor; laboratories, offices and recitation rooms above; vault; compressed air and vacuum system; gas and electricity; cost about \$100,000; completion by Sept., 1916. (Noted in July.)

S. C., Bethune.—Trustees are having plans prepared by R. W. Mitcham, Camden, S. C., for school building; 8 classrooms; brick; tin roof; cost about \$8000; plans and specifications ready Aug. 14. (Noted in July.)

S. C., Blaney.—Trustees are having plans prepared by R. W. Mitcham, Camden, S. C., for school building; 6 classrooms; auditorium; brick; slate roof; cost \$7500; plans and specifications ready Aug. 30. (Noted in June.)

S. C., Blythewood.—School Dist. No. 21, J. M. Hawley and others, Commrs., plans to erect school building; 2 stories; 6 classrooms and auditorium to accommodate about 400; Dist. votes Aug. 10 on \$7000 bonds to be supplemented by special tax levy; will also consider establishment of high school. (Noted in July.)

S. C., Florence.—Tans Bay School Dist. voted \$5000 bonds to erect school building; address School Trustees.

S. C., Townville.—City, F. R. Fant, Chrmn. Board, is having plans prepared by C. Gadsden Sayre, Anderson, S. C., for school building; 68x90 ft.; 6 classrooms; brick veneer; metal roof; cost about \$6000; bids opened about Sept. 2. Address Mr. Fant. (Lately noted.)

Tenn., Chattanooga.—County Board of Education, W. S. Beck, Chrmn., receives bids at Courthouse until Aug. 17 to erect additions to North Chattanooga (South Side) and Mountain Creek school buildings and install plumbing, heating and lighting; plans and specifications by J. D. Alsop, James Bldg., Chattanooga.

Tex., Beaumont.—South Park Ind. School Dist. Board opens bids Aug. 14 to erect addition to and alter South Park School; 2 stories; semi-fireproof; asbestos shingle roof; wood joist floor; Warren Webster steam heat; cost \$37,500; Sanguinet, Staats & Gottlieb, Archts., Houston Tex. Address School Board. (Lately noted.)

Tex. Fort Stockton.—Pecos county will vote on \$35,000 bonds to erect high-school building. Address County Commrs.

Tex., Gatesville.—Trustees State Juvenile Training School, Davis R. Hall, Chrmn., receives bids until Sept. 15 to erect hospital building and honor cottage No. 3; costs about \$15,000 and \$10,000, respectively; 2 stories; fireproof; brick and concrete; plans to be had after Sept. 1; Roy E. Lane, Archt., Waco, Tex.; Mr. Lane will also draw plans to remodel dining-room and kitchen to cost about \$2500. (Lately noted.)

Tex., Galveston.—City votes in September on \$300,000 bonds for schools. Address The Mayor.

Tex., McAdams.—Bastrop county votes Aug. 12 on \$3000 bonds to erect frame school building.

Tex., Moore.—School Dist. voted \$12,000 bonds to erect addition to present school building, erect building for Mexican children and equip both buildings. Address School Trustees. (Noted in July.)

Tex., Pearsall.—School Board is having plans prepared by Adams & Adams, San Antonio, for Mexican school building; 4 classrooms, porch, coatrooms, etc.; arranged to convert 2 classrooms into auditorium; cost about \$3500. (Lately noted.)

Tex., San Angelo.—School Board is reported to have acquired site for proposed \$90,000 school building for which bonds were sold.

Va., Salem.—Roanoke College, Finance Com., will erect president's residence; 12 rooms; colonial type; brick; modern improvements; Frank A. Rommel, Archt., Weightman Bldg., Philadelphia, Pa.

W. Va., Accoville.—Dr. J. W. Thornbury, Pres. Board of Education, Triadelphia Dist., Mann, W. Va., receives bids until Aug. 20 to erect 4-room school building in sub-district No. 4 at Accoville; 4-room school building in sub-district No. 17 at Earling, W. Va.; 4-room school building in sub-district No. 5 at Amherst, W. Va.; separate bids at same time for heating and plumbing systems in said buildings; plans and specifications at office of Dr. Thornbury; Logan Hardware Co., Logan, W. Va.; Lon E. Browning, County Supt., Logan, W. Va.

W. Va., Amherst (not a postoffice).—See W. Va., Accoville.

W. Va., Blacksville.—Board of Education will erect school building; 1 story; brick veneer; cost \$8000; bids opened Aug. 10; Elmer Jacobs, Archt., Morgantown, W. Va.

W. Va., Earling (not a postoffice).—See W. Va., Accoville.

W. Va., Kanawha County.—Geo. Jenkins, Jr., County Supt. Schools, is having plans prepared by Paul Egan, Charleston, W. Va., for 1, 2 and 3-room school buildings. Address Mr. Jenkins. (See Machinery Wanted—Heaters.)

W. Va., Shenandoah Junction.—Board of Education, J. McGerry, Chrmn., will receive bids to erect school building; 60x70 ft.; 1 story; brick; J. W. Woltz, Archt., Waynesboro, Pa.

STORES

Ala., Birmingham.—Robert Stephens will erect 2-story brick-veneer building at N. 29th St. and 12th Ave.; cost \$3550.

Ala., Birmingham.—Birmingham Realty Co. will erect 2-story brick building at 14th alley and 33d St.; cost \$3300.

Ala., Birmingham.—Coleman R. Shepherd is reported to erect building for wholesale grocery store.

Ark., Fulton.—J. J. Battle will erect store and bank building for occupancy by Battle Hardware Co. and Bank of Fulton; 50x150 ft.; 1 story; brick; plans by Jas. H. Bliss, Hope, Ark.; construction by owner. (Noted in June.)

Ark., Helena.—Jos. L. and Phil Solomon will rebuild brick business building damaged by fire; 62x132 ft.; cost about \$5000.

Fla., Miami.—Fort Dallas Lodge, I. O. O. F., and Victor Encampment will erect store and lodge building. (See Association and Fraternal.)

Fla., Okeechobee.—Mayor Raulerson plans to erect store building; 40x50 ft.; will be occupied by Z. H. Simmons.

Ga., Atlanta.—McClure Co. will improve building at 11-13 Whitehall St.; cost \$300; day labor.

La., New Orleans.—Dr. T. E. Allen will erect store and dwelling. (See Dwellings.)

Mo., St. Louis.—Sam G. Stahlhut will erect store and flat building on Easton Ave. east of Burd Ave.

N. C., Bridgeton.—Chas. Ipock will erect building on Bridge St., near waterfront, to replace structure recently reported burned; 2 stories; about 25x40 ft.; fireproof; brick.

N. C., Bridgeton.—John Bowen will erect building on Bridge St., near waterfront, to replace structure recently reported burned; 2 stories; about 25x40 ft.; fireproof; brick.

N. C., Bridgeton.—Dr. B. B. Smith contemplates rebuilding structure on Bridge St. recently reported burned.

N. C., Bridgeton.—J. H. Oglesby will erect building on Bridge St., near waterfront, to replace structure recently reported burned; 2 stories; about 25x40 ft.; fireproof; brick.

N. C., Winston-Salem.—J. F. Smithden is having plans prepared by Humphrey & Faw, Winston-Salem, to remodel building on 5th St. for store; 2 stories; 20x100 ft.; terra and brick front; cost \$8000; plans ready Aug. 10. (Lately noted.)

Okla., Aline.—Walter Corliss, Oakwood, Okla., is reported to erect cement business building.

Okla., Drumright.—W. R. Maxey and S. M. Harris, both of Muskogee, Okla., plan to erect brick business building; 25x100 ft.

Okla., Enfield.—T. S. Sweeney is having plans prepared for business building; 25x50 ft.

Okla., Jennings.—T. O. Ham plans to erect 2-story brick business building.

Okla., Ringling.—Z. L. Boles will erect store building to replace burned structure; brick.

S. C., Anderson.—Mary J. Miller Earle will erect 2 storerooms on W. Church St.; 2 stories; 53x80 ft.; pressed-brick front; plate-glass windows; arched driveway between stores.

Tex., Dallas.—L. Wolff Mfg. Co. will remodel and erect addition to building at Pacific and Preston Sts.; 120x50 and 75 ft.; 2 stories; will add 1 story; mill construction; cost about \$10,000; C. W. Bulger & Son, Archts., Praetorian Bldg., Dallas. (Lately noted under Miscellaneous Factories.)

Tex., San Antonio.—L. Lobert has plans by L. M. J. Diemann, San Antonio, for business and apartment building; 43x60 ft.; 2 stories; brick; gravel roof; plate-glass front; cost \$9000.

Va., Charlottesville.—Holles Rinehart is reported to erect building to contain 3 storerooms.

Va., Charlottesville.—J. E. Andrews is reported to erect building for 2 storerooms adjoining present structure.

Va., Roanoke.—McClanahan, Allen & Palmer will erect 2-story brick store building on Church Ave.; cost \$9000.

W. Va., Huntington.—Holley & Armstrong will erect business building at 4th Ave. and 8th St.; cost \$30,000 to \$40,000.

W. Va., Princeton.—G. H. Brown opened bids to erect store and apartment building. (See Apartment-Houses.)

W. Va., Wellsburg.—A. F. & A. M. are having plans prepared for lodge and store building. (See Association and Fraternal.)

W. Va., Parkersburg.—Mrs. A. G. Cole, 120 17th St., will erect store and apartment building at Dudley and 19th Sts.; brick; 2 stories; 21x75 ft.; Wm. H. Patton, Archt., Parkersburg; bids opened Aug. 9.

THEATERS

Ark., Hartford.—H. H. Jackson will erect brick and stone theater to replace burned building; 1 story; 25x110 ft.; cost \$3000; Reinhardt & Eadie, Huntington, Ark., will purchase material.

WAREHOUSES

Fla., Ocala.—Louis R. Chazel & Sons Co. will not erect corn warehouse at present. (Lately reported.)

Ark., Amerious.—Dudley Bonded Warehouse was incept. with capital stock of \$8000 with privilege to increase to \$100,000; N. M. Dudley, H. C. Dudley and Geo. M. Dudley, Amerious, and Leroy G. Henderson, Knoxville, Tenn., incorporators.

Ga., Senola.—Senola Oil & Fertilizer Co. is erecting warehouse and installing gluing equipment.

Ky., Paducah.—Mike Oliver, J. R. Grogan and others, near Epperson, plan to erect potato-storage house; capacity 10,000 bus.

Md., Baltimore.—C. Warner Storck has plans by E. H. Glidden, Garrett Bldg., Baltimore, for warehouse at 1112-6 Cathedral St.; 3 stories; 120x50 ft.; mill construction; slag roof; concrete and pine floor; steam heat; electric light; bids opened Aug. 12. (Lately noted.)

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Ga., Atlanta.—Geo. Gordon let contract to Henry J. D. May, 716 Temple Court Bldg., Atlanta, to erect apartment-house at Lee and Oak Sts.; 70x76 ft.; 3 stories; brick; tar and gravel roof; oak floor; tile baths; electric light; cost \$29,000; \$1500 vapor heat; plans by contractor. (Lately noted.)

La., New Orleans.—S. D. Drapkin, Secy. New Orleans Cold Storage Co., has plans by and let contract to Horman & Toups, New Orleans, to erect duplex apartment-house on Peters Ave.; porches; each apartment to have 3 bedrooms, hall, living-room, dining-room, pantry, closets, clothes chutes, automatic door openers, communicating telephones, marbleoid floors, etc.; cost about \$8000.

Mo., St. Louis.—Independent Investment Co. let contract to F. A. Darr, St. Louis, to erect tenement at 4026-28-30-32 McKee St.; 2 stories; cost \$10,000.

Mo., St. Louis.—Dover Realty & Investment Co. let contract to Dreis Building & Contracting Co., St. Louis, to erect 2-story tenement at 735 Dover Pl.; cost \$5500.

Tenn., Nashville.—T. Tobias, Oklahoma City, let contract to erect apartment house at 1st and Woodland Sts.; cost \$10,000.

Tex., El Paso.—L. E. Booker let contract to erect apartment and store building on W. San Antonio St. (See Stores.)

N. C., Wilmington.—Oscar Pearsall let contract to Rhodes & Underwood, Wilmington and Newbern, N. C., to remodel Colonial Inn for apartments; 3, 4 and 5-room apartments on first, second and third floors; 4th floor for bachelor apartments; steam heat; shower baths; electric elevator; J. F. Leitner, Archt., Wilmington; also let contract to W. R. Dasher & Co., Wilmington, for plumbing. (Lately noted.)

Tenn., Memphis.—Hunter Wilson let contract to C. E. Wade, Memphis, to erect apartment-house at 1548 Union Ave.; 4 apartments; 2 stories; cost \$16,000.

Va., Petersburg.—R. L. Watson & Co. are reported to have let contract to E. D. Hobbs Law Bldg., Norfolk, to erect apartment-house on Union St.; site 100x262 ft.; cost of building \$100,000; J. W. Johnson, Norfolk, has contract to raze building on site.

W. Va., Wheeling.—D. Charalich & Haglins let contract to erect store and apartment-house. (See Stores.)

BANK AND OFFICE

Fla., Marianna.—Wilson & Calhoun are reported to have let contract to erect store and office building. (See Stores.)

Ky., Lexington.—First National Bank let contract to D. K. Cecil, Lexington, to remodel building on Main St. for bank purposes; 1 story; 30x70 ft.; brick; terra-cotta front; tile floor; steam heat; cost \$8000; Joel R. Hill, Archt., Winston-Salem, N. C. (Noted in May.)

Mo., Kansas City.—Ridge Estate Co., 233 Ridge Bldg., is reported to have let contract to Geo. A. Fuller Construction Co., 2218 Grand Ave., Kansas City, to erect mercantile and office building on Walnut St.; 57x115 ft.; 7 stories and 2 basements; fireproof;

Mo., Kansas City.—Duff-Hepp Furniture Co. purchased site on Locust St. for warehouse; will erect building 90x132 ft.; 5 stories and basement.

N. C., High Point.—Snow Lumber Co. will erect warehouse at 212 E. Commerce St.; 25x75 ft.; 3 stories; brick; Carey roof; private electric plant; plans and construction by owner. (See Machinery Wanted—Elevator, and Sprinkler System.)

Tenn., Memphis.—Sternberg & Sons have plans by Jones & Furbinger, Memphis, for warehouse on S. Main St.; 14x25 ft.; semi-fireproof; brick exterior; gravel roof; 3 stories and basement; bids opened Aug. 13; will be occupied by Central Distributing Co.

Tenn., Memphis.—D. Canale & Co. and other firms are reported to erect wholesale station near Front St. and Beale Ave.; cost \$50,000.

Tex., Austin.—C. H. Page & Bros. Austin, are preparing plans to erect bonded warehouse; capacity 2000 bales cotton.

Tex., Galveston.—W. L. Moody & Co. are reported to erect cotton shed adjoining compress; capacity about 40,000 bales; cost about \$50,000.

Tex., Mincola.—Citizens' Compress Co. will erect warehouse; capacity 3500 bales cotton.

concrete slab roof; concrete floors; steam heat; electric lighting; concrete prismatic sidewalks; electric elevator; cost \$100,000; Smith, Rea & Lovitt, Archts., Finance Bldg., Kansas City. (Noted in June.)

Mo., St. Louis.—W. K. Bixby let contract to John Hill Construction Co., St. Louis, to alter office building; cost \$3000.

S. C., Charleston.—Charleston Building & Investment Co. let contract to Palmer-Spivey Construction Co., Augusta, Ga., to erect bank building at 302 King St.; 25x95 ft.; 2 stories; brick with limestone front; tin roofs; concrete and tile on first floor, wood on second; hot-water heat; electric and gas lighting; cost complete \$12,000; J. D. Newcomer, Archt., Charleston. (Lately noted.)

S. C., Greenwood.—Bank of Greenwood let contract to Geo. W. Muller Bank Fixture Co., Atlanta, Ga., to remodel interior of building.

Va., Norfolk.—National Bank of Commerce let contract to erect additional story to bank building. (See Miscellaneous—Lunchroom.)

W. Va., Ashland.—Second National Bank let contract to Sanders & Fearing, Ashland, to erect 4-story building at 15th St. and Winchester Ave.; also let contract to Mossman Bros., Huntington, W. Va., for 100,000 face brick manufactured by Columbus Brick & Terra-Cotta Co., Columbus, O.; plumbing and heating, Union Plumbing Co., Ashland; 500,000 common red brick, O'Kelley Co., Ashland; first floor for bank and 3 store buildings; Chas. Kitchen, Chrmn. Building Comm. (Samuel Collier lately noted having contract to excavate 50x143 ft., 12 ft. below sidewalk.)

CHURCHES

Ga., Savannah.—St. John's Episcopal Church let contract to A. S. Bacon & Sons, Savannah, to make alterations to building; mezzanine floor in Sunday-school room; new stairs; remodeling; cement and stone parapet; Henrick Wallin, Archt., Savannah. (Noted in July.)

Mo., St. Louis.—Evangelical Lutheran Bethlehem Church let contract to H. Hemminghaus, St. Louis, to erect addition to boiler-room at 3615-17 N. 19th St.; cost \$4400.

Tex., Hillsboro.—Arthur Anderson, Frank Middleton, Geo. Russell and G. W. Garrett, committee, let contract to Ross & Son, Bynum, Tex., to erect Presbyterian Church building at Jessie; main portion 25x44 ft., with ell 12x20 ft.

CITY AND COUNTY

Ga., Albany.—Auditorium.—City let contract at \$40,413 to Pike Bros. Lumber Co., La Grange, Ga., to erect auditorium; contract for electric wiring to Electric Service Co. at \$2900; heating to Eastman Plumbing Co., both of Albany. (Contractors lately noted as low bidders.)

COURTHOUSES

W. Va., Clintwood.—Dickenson County Commrs. let contract to D. J. Kelly, Clintwood, to erect courthouse; colonial type; pressed-brick exterior; steam heat; cost about \$25,000; H. M. Miller, Archt., Roanoke, Va. (Noted in June.)

DWELLINGS

Ala., Birmingham.—L. M. Porter let contract to J. J. Holmes, Birmingham, to erect dwelling on Wilner Heights; 3 stories and basement; brick veneer; cement tile roof; warm-air heat; Ben Price, Archt., Birmingham. (Noted in June.)

Ala., Birmingham.—Mrs. Saml. Wilder let contract to F. G. Williams Construction Co., Birmingham, to erect dwelling; 2 stories; brick veneer; Salle & Mewhinney, Archts., Woodward Bldg., Birmingham. (Noted in July.)

Ala., Gadsden.—Dr. Gordon Silvey let contract to M. J. Lloyd to erect bungalow at 11th St. and 7th Ave.; 5 rooms; heating and lighting equipment; hardwood floors; cost \$3000.

D. C., Washington.—Dorothy Santnyers let contract to Geo. T. Santnyers, 216 Kenols Bldg., Washington, to erect dwelling at 2832 Brentwood Rd.; cost \$3000; plans by Contr.

D. C., Washington.—Milton F. Schwab let contract to H. K. Boss, 714 14th St. N. W., Washington, to erect dwelling at 3126 38th St. N. W.; cost \$7000; A. H. Sonneman, Archt., 1334 H St. N. W., Washington.

Fla., Okeechobee.—T. A. Bass let contract to Ralph E. Steele, Okeechobee, to erect dwelling; 32x48 ft.; bungalow type; frame; flexatile roof; cost \$3000; plans by contractor.

Ga., Savannah.—W. C. Lawson has plans by I. P. Crutchfield and let contract to Standard Investment Co., Savannah, to erect residence at Drayton and 35th Sts.; brick veneer finished with stucco; 2 stories; 8 rooms; hardwood floors; cost \$7000.

Ga., Senola.—Mrs. Elam Deracken let contract to R. D. Cole Co. to erect dwelling to replace burned structure.

La., New Orleans.—Julius A. Meyer let contract to Jones & Roscoe, New Orleans, to erect dwelling; 2 stories; slate roof; cost \$3698.

La., New Orleans.—Miss Mary Mouldous let contract to Jos. M. De Fraites to erect 2-story frame dwelling; cost \$4390.

La., New Orleans.—V. S. Bennet let contract to Herman Schilling to erect dwelling; frame; E. B. Mason, Archt.

La., Oberlin.—S. N. Young let contract to B. F. Amullier to erect dwelling; cost \$3500; contractor to buy all material.

Md., Baltimore County.—Jos. G. Reynolds let contract to Henry A. Knott, 1340 N. Eden St., Baltimore, to erect dwelling in Long Green Valley; 2½ stories; brick; cost about \$9000; G. Murray Myers, Archt.

Miss., Hattiesburg.—Geo. M. Calhoun let contract to erect 2-story colonial residence and bungalow.

Mo., St. Louis.—E. Sommers let contract to Theo. Albrecht, St. Louis, to erect dwelling; cost \$4000.

S. C., Anderson.—Equinox Mill let contract to erect 25 cottages and warehouse. (See Warehouses.)

S. C., Lake City.—J. L. Richardson let contract to Littlejohn & Rodgers, Florence, S. C., to erect residence; frame; asphalt roof; electric lighting; cost \$3000; L. McD. Hicks, Archt., Florence, S. C. (Noted in July.)

S. C., Walterboro.—Dr. Riddick Ackerman let contract to W. A. Stewart, Walterboro, to erect dwelling on Hampton St.; 10 rooms; frame; probably metal shingle roof; hardwood and pine floor; electric light; cost \$5000; plans by contractor. Address owner. (See Machinery Wanted—Building Material.)

Tex., Denton.—Dudley Cox let contract to erect 10-room dwelling.

Tex., Fort Worth.—J. H. Strayer let contract to Tyte & Kenning, Fort Worth, to erect 1-story frame dwelling at 1511 S. Adams St.; cost \$3000.

Va., Norfolk.—Mrs. Jas. Bain let contract to A. J. Reynolds to erect dwelling on Graddon Ave. near Leigh St.; 2 stories; hollow tile; cost \$4200.

W. Va., Fairmont.—J. F. Boor let contract to Chas. Toothman, Fairmont, to erect dwelling on Fairmont Pike; 2 stories.

W. Va., Parkersburg.—Capt. F. G. Davis let contract to R. L. Brown to erect residence at Washington Ave. and Latrobe St.; cost \$10,000.

GOVERNMENT AND STATE

Ala., Opelika.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., is reported to have let contract to Geo. A. Clayton, Gould Bldg., Atlanta, to erect postoffice building; 3 stories and absement; 5000 sq. ft. ground area; fireproof except roof; composition roof; stone, ornamental terra-cotta and brick facing; wood cornice and parapet; cost

about \$84,000. (Mr. Clayton lately noted as lowest bidder.)

Mo., Webb City.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Supervising Archt., Washington, D. C., is reported to have let contract to Geo. A. Shaul, Seneca, Kans., to erect postoffice, including mechanical equipment, lighting fixtures and approaches; plans call for 1-story-and-basement structure; 4500 sq. ft. ground area; fireproof except roof; composition roof; stone facing; cost about \$50,000. (Noted in June.)

Tex., Austin.—Asylum.—Board of Managers of State Insane Asylum let contract to J. C. Eade, Austin, to erect carpenter shop, additions to women's ward, boiler-room, Pasteur Institute and make other repairs; cost about \$17,000; also let contract to John L. Martin, Austin, for plumbing and heating to cost about \$4000; C. H. and Louis Page, Archts., Austin.

HOSPITALS, SANITARIUMS, ETC.

Ark., Little Rock.—Board of Control let contract to J. P. Williams, Newport, Ark., to erect annex to hospital; 1 story; 44x92 ft.; H. J. Harker, Archt., Little Rock.

D. C., Washington.—Garfield Memorial Hospital let contract to H. Stuart Boyer, Secy. Treas. of J. Carey King Co., 37 New York Ave. N. E., Washington, for alterations to interior of main building; cost about \$12,000; Marsh & Peters, Archts., 520 13th St. N. W., Washington. (Noted in July.)

La., Crowley.—Crowley Hospital Comm. let contract to Jim M. Daniel to erect hospital and surgical building at Ave. K and 7th St.; 50x80 ft.; frame; asbestos roof; cement floor; cost \$15,000; hand elevator; \$2000 hot-water heat; \$400 electric light; cement sidewalk.

W. Va., Parkersburg.—Wood County Commrs. let contract to Joe Hille to erect infirmary; brick; slate roof; central administration section 50x64 ft.; 2 wings about 35x65 ft.; each to contain about 60 rooms; shower baths; hot-water heating system; electric-light plant; cost \$21,908; T. T. Sansbury, Archt., Parkersburg. (Noted in June.)

MISCELLANEOUS

Va., Norfolk.—Lunchroom.—National Bank of Commerce let contract to Baker & Brinkley, Norfolk, to erect additional story to bank building for use as lunchroom by Chamber of Commerce Club; fireproof; copper, tar and gravel roof; cement slab and marbleoid floor; cost about \$12,000; \$15,000 steam heat; S. H. Mass, Archt., Bank of Commerce Bldg., Norfolk. Address H. C. Meredith, Bank of Commerce Bldg. (Lately noted under Bank and Office.)

RAILWAY STATIONS, SHEDS, ETC.

W. Va., Roncoverie.—Chesapeake & Ohio Ry., F. I. Cabell, Ch. Engr., Richmond, Va., let contract to J. D. and J. H. Moore, Charleston, W. Va., to erect passenger station; 2 stories; 26x85 ft.; gray pressed brick; slag roof on shed, slate on building; concrete and wood floor; \$1800 steam heat; \$350 electric light; cost about \$25,000. (Noted in July.)

SCHOOLS

Ark., Blytheville.—City let contract to Frank Simmons to erect negro school building; 30x75 ft.; frame; tin roof; cost \$3000; construction in Sept.

Ark., Higden.—School Board let contract to Clark & Davis, Heber Springs, Ark., to erect 2-room school building.

Ark., Marmaduke.—School Board, W. J. Lively, Secy., let contract to W. W. Brown, Paragould, Ark., to erect school building; cost \$9324.

D. C., Washington.—Society of Oblate Fathers let contract to Boyle-Robertson Construction Co., 1516 H St. N. W., Washington, to erect scholasticate at Michigan Ave., Lincoln Rd. and 4th St.; 3 stories; Fort Deposit granite; limestone trim; cost \$115,000; Henry Rourke, Archt., Lowell, Mass.

Fla., Pensacola.—School Board let contract at \$17,452 to S. F. Fulghum & Co., Pensacola, to erect grammar-school building in western part of city; 2 stories; brick; 9 rooms; accommodate 300 students; W. D. Willis, Archt., 619 Blount Bldg., Pensacola. (Noted in July.)

Fla., Tarpon Springs.—School Board, Clearwater, Fla., let contract to Miller Co., Tampa, Fla., to erect school building; cost about \$5000; Lester Avery, Archt., Clearwater. (Lately noted.)

Ga., Griffin.—Georgia Cotton Mill and Kincaid Mfg. Co. let contract to Beck & Huggins, Griffin, to erect school building; each classroom to seat 50; auditorium on second floor to seat 300; cloakrooms, etc.; cost \$5000.

Ky., Lexington.—City let contract to Frank Corbin, Lexington, at \$15,626 to erect negro school in Forest Hill; 6 classrooms; auditorium; native stone foundation; brick superstructure; limestone trimming; also let contract for plumbing to J. J. Fitzgerald at \$1054; heating to Saml. Reynolds at \$1975. (Noted in July.)

Ky., Whitesburg.—Fletcher County Board of Education let contract to Franklin & Brown, Whitesburg, to erect school building on Main St.; 65x75 ft.; brick; Cortright shingle roof; cost \$12,000; heating and lighting separate; A. Dietz, Archt., Lexington, Ky. Address Contr. (Noted in June.)

La., Glenmora.—Rapides Parish School Board let contract to Caldwell Bros., Abbeville, La., to erect school building; cost \$22,000; H. J. Duncan, Archt., Alexandria, La. (Lately noted.)

N. C., North Charlotte.—County School Board let contract to J. E. Solomon, Charlotte, to erect school building; 60x70 ft.; frame; brick foundation; 4 classrooms, cloakroom and toilet; hot-air heat; Dr. Simmons of North Charlotte is member of building Comm. (Previously noted.)

N. C., Norlina.—School Board let contract to J. W. Stout & Co., Sanford, N. C., at \$10,700 to remove old building and erect new; 58x55 ft.; ordinary construction; tin roof; steam heat; electric light; C. Gadsden Sayre, Archt., Anderson, S. C. (Noted in July.)

Okl., Drumright.—School Board let contract to J. F. Rankin at \$47,000 to erect high-school building and to Cook & McDonald at \$5800 for heating and plumbing; basement to be arranged for manual training and domestic science departments. (Lately noted.)

Okl., Okmulgee.—School Board let contract to Caddo Construction Co., Muskogee, Okla., to erect high-school building; contract for heating and plumbing let to O'Connor Co., Muskogee; Smith, Rea & Lovett, Architects, Finance Bldg., Kansas City, Mo. (Noted in June.)

Okl., Pryor.—School Board let contract to E. E. Johnson, Pryor, to erect school building; 62x82 ft.; 2 stories; brick; cost about \$10,000. (Noted in May.)

Okl., Stilwater.—School Board, A. J. Bartelower, Prest., let contract to Swatteck & Parker, Oklahoma City, to erect 6-room addition to Jefferson school building; cost \$7500. (Noted in July.)

Okl., Sulphur.—State Board of Affairs, Oklahoma City, let contract to John Denney & Son, Durant, Okla., to erect 2-story brick and reinforced concrete building at State School for Deaf and Dumb; cost \$15,400.

S. C., Rock Hill.—Winthrop Normal and Industrial College let contract to Willard & Boggs, Spartanburg, S. C., at \$42,000 to erect gymnasium building; 3 stories; 74x128 ft.; swimming pool wing 1 story; mezzanine balcony; 30x70 ft.; slate and tin roof; hardwood and tile floor; Webster system heating from central plant; electric light; cost complete \$60,000; mechanical contract separate; completion about Feb. 1; let contract for plumbing and heating to L. F. Waldrop, Rock Hill. (Noted in July.)

Tenn., Knoxville.—Park City School Board let contract to Calhoun & Brooks, Knoxville, at \$11,580 to erect addition to and finish basement of high school on Linden Ave.; addition 43x55 ft.; brick and Bedford stone; asphalt shingle roof; oak floor; steam heat, plumbing and electric light separate; John H. Ryne, Archt., Vandeventer Bldg., Knoxville. (Lately noted.)

Tex., Dallas.—School Board let contract to Kinison Bros., Dallas, at \$3194 for heating plant for Lamar school building, for which Buchanan & Gilder, Fort Worth, have general contract at \$41,211; also let contract to Dan J. Underwood & Co., Dallas, at \$1250 for electric wiring; H. A. Overbeck, Archt., Dallas. (Noted in July.)

Tex., Waco.—School Board let contract to J. E. Johnson, Waco, at \$9732 to erect school building at 9th and Oakwood Sts.; 1 story and basement; brick; Milton W. Scott & Co., Architects, Waco; also let contract at \$925 to W. E. Gorman to erect 2-room negro school building in East Waco. (Noted in July.)

W. Va., Baxter.—School Board let contract to Hinkle & Biggs, Grant Town, W. Va., to erect school building; brick, with stone trimming; cost \$12,000; contractors will let sub-contracts.

W. Va., Beryl.—Board of Education, Piedmont, W. Va., let contract to install plumbing and heating in school building. (See W. Va., Piedmont.)

W. Va., Piedmont.—Board of Education, W. S. Smallwood, Prest., let contract to Chas. Kuhle, Westernport, Md., to install

plumbing and heating in Beryl school; let contract to Harrison Bros. Contracting Co., Westernport, to erect addition to Davis school; cost \$7000. (Noted in May.)

STORES

Ala., Robertsdale.—Chas. G. Hollis let contract to M. Donahue, Robertsdale, to erect store building; 40x100 ft.; frame; shingle roof; pine floor; cost \$3000.

Ala., Montgomery.—Mr. Weil let contract to R. E. L. Majors, Montgomery, to erect store building; 2 stories; plate-glass front.

Ark., Newport.—C. J. Saenger let contract to W. H. Snetzer, Newport, to erect 1-story brick business building; 50x80 ft.; cost \$4000; construction begun. (Lately noted.)

Fla., Marianna.—Wilson & Calhoun are reported to have let contract to erect store and office building; 2 stories; brick; 50x90 ft.; lower floor for stores; upper floor, offices.

Fla., Marianna.—Daffin Mercantile Co. let contract to erect building. (See Warehouses.)

Fla., Okeechobee.—T. A. Davis let contract to erect 2-story building.

Fla., Tampa.—Maas Bros. let contract to J. S. Sweet & Bro., Tampa, to remodel store building; cost about \$3000; elevator, fireproof shaft, separate; F. J. Kennard, Archt., Tampa.

Fla., West Palm Beach.—Cooper C. Lightbown has contract to erect several buildings on Olive St.; reinforced concrete.

Ga., Atlanta.—Jas. T. Anderson let contract to Griffin Construction Co., Atlanta, to erect store building at 142 Whitehall St.; 5 stories; 27x102 ft.; reinforced concrete; enamel brick front; fireproof; tar and gravel roof; steam heat; upper floors for storage purposes; cost about \$18,000; Horace B. Hammond, Archt., 1429 Candler Bldg., Atlanta. (Lately noted.)

La., DeRidder.—Joe Stoma let contract to J. A. Wilson to erect store at foot of Washington Ave.; 84x42 ft.; brick; cost about \$4000.

Miss., Senatobia.—T. M. McLendon let contract to Ernest Motherhead to erect store building on Main St.

Mo., Kansas City.—W. F. Hall and F. G. Crowell are reported to have let contract to Harvey Stivers, 2447 Trost Ave., Kansas City, to erect business building at 1533-35 Walnut St.; 48x105 ft.; 7 stories; cost about \$75,000; J. C. Sunderland, Archt.

Mo., Kansas City.—Ridge Estate Co. is reported to have let contract to erect mercantile and office building. (See Bank and Office.)

Mo., Kansas City.—Moribros Investment Co. is reported to have let contract to Aiken & Thayer to erect business building on E. 23d St.; 6 stories; 70x117 ft.; reinforced concrete; cost about \$65,000; John W. McKecknie, Archt., Lloyd Bldg., Kansas City. (Noted in July.)

Mo., St. Louis.—Ajax Realty Co. let contract to John Hill Construction Co., St. Louis, to alter mercantile building; cost \$3000.

Mo., St. Louis.—Samuel F. Myerson of Myerson Printing Co. let contract to Chas. B. McCormick to remodel building at Washington and Vandeventer Aves. for store; Thos. P. Barnett, Archt., St. Louis; cost \$3200.

Mo., St. Louis.—Lewis estate will remodel store building at 205 N. Broadway; cost \$4000; Acme Restaurant Co., Contr.

Tex., Denton.—J. F. Raley let contract to remodel 2 buildings; extend second story on one; install fronts, etc.; cost about \$5000.

Tex., El Paso.—L. E. Booker let contract to Perry & Kirkpatrick, El Paso, to erect 3 store and apartment buildings on W. San Antonio St.; each 75x100 ft.; pressed brick; tar and gravel roof; concrete and wood floor; \$3000 heating; total cost \$60,000; construction begun. (Lately noted.)

Tex., Fort Worth.—Mr. Van Zant let contract to E. Johnson to remodel building at Houston, 3d and Main Sts. for occupancy as annex by L. G. Gilbert Dept. Store; 25x150 ft.; cost \$5000; Mr. King, Archt. Address L. G. Gilbert, Houston, 3d and Main Sts., Fort Worth.

Tex., Houston.—Henke & Pillott let contract to Chas. W. Raper, Houston, to erect addition to store and bakery at Milam and Congress Sts.; extend retail store; erect 2-story reinforced concrete addition for bakery; install 3 bread and 1 cake oven and other equipment; build lockers, install water tank, etc.; cost \$20,000; Rezin D. Steele, Archt., 510 First National Bank Bldg., Houston.

Va., Norfolk.—Dr. R. L. Payne let contract to L. McCloud to erect five 1-story brick store buildings on Freemason St., between Granby and Boush Sts.; cost \$6000.

W. Va., Ashland.—Second National Bank let contract to erect bank and store building. (See Bank and Office.)

W. Va., Wheeling.—D. Charachis & Haginson let contract Kileves Lumber Co., Wheeling, to erect store and apartment-house on Market St.; cost \$3500.

WAREHOUSES

Fla., Marianna.—Daffin Mercantile Co. let contract to A. F. Davis, Marianna, to erect warehouse; concrete foundation; irregular dimensions; native stone construction faced with brick; 3 floors, including basement; 13,000 sq. ft. floor space; construction begun.

La., New Orleans.—Board of Levee Commissioners let contract to Leo C. Leone &

Co., 826 Perdido St., New Orleans, to erect warehouse and toolhouse at St. Maurice St. and Pontalba St.; 56x30 ft.; brick and concrete; composition roof; Schilling door; electric light; cost about \$3500; D. W. Benson, Archt., 201 New Orleans Court Bldg., New Orleans. (Lately noted.)

N. C., Varina.—Varina Improvement Co. has plans by and let contract to V. C. Smith to erect tobacco prizehouse on Durham St.; 50x300 ft.; frame; tin or rubber roof; heart pine floor; cost \$4000; construction begun. Address owner. (Lately noted erecting 1 prizehouses.)

S. C., Anderson.—Equinox Mill let contract to Gallivan Building Co., Greenville, S. C., to erect warehouse and 25 cottages; mill construction; partly fireproof; tar and gravel roof; floor partly concrete; cost \$5,000; J. E. Sirrine, Archt. and Engr., Greenville. (Noted in June.)

RAILROAD CONSTRUCTION

RAILWAYS

Ark., Paragould.—Chamber of Commerce is taking active steps to get subscriptions for the proposed extension of the Cache Valley R. R. from Light to Paragould, 17 mi.

Fla., Miami.—Election is to be held Sept. 21 on a proposed issue of \$40,000 bonds of the city of Miami to build a railway from the west shore of Biscayne Bay to a connection with the Florida East Coast Ry. J. W. Watson is Mayor and W. B. Moore City Clerk.

Ga., Cairo.—J. M. Wilkinson, Valdosta, Ga., Prest. Pelham & Havana R. R. Co., confirms report that it proposes to build extension from Darsey to Havana, Fla., 5 mi., through level country.

Ga., Hawkinsville.—Hawkinsville & Western Ry. has been leased by the Ocala Southern R. R., of which J. A. J. Henderson of Ocala, Ga., is Prest., and improvements are expected.

Ga., Homer.—C. J. Hood of Commerce, Ga., is elected Prest. of the Lula-Homer R. R. Co. and construction is to begin at an early date. D. G. Zeigler is Engr.

Ky., Ashland.—The Ohio Valley Electric Ry. Co. says that the proposed extension from Ashland to Russell is very uncertain. This refers to a recent press report.

La., New Orleans.—Plans proposed by Bion J. Arnold for the New Orleans Belt Line extension to the cotton warehouse have been approved by the Public Belt Commission. E. R. Barnes is Engr. at the City Hall.

Md., Cumberland.—Rumored that plans are under consideration looking to an extension of the Huntington & Broad Top R. R. from Everett, Pa., southward to Little Orleans, Md., on the Baltimore & Ohio R. R. Construction required in Maryland would be 8 or 10 mi. C. M. Gage is Prest. and Gen. Mgr., North American Bldg., Philadelphia.

Miss., Meridian.—Construction of the Meridian & Deepwater Ry. from Meridian to Myrtlewood, Ala., about 50 mi., is to start in December. S. A. Neville of Meridian is Vice-Prest.

N. C., Charlotte.—Southern Ry. has let contracts for double-tracking as follows: Concord to Rocky River, N. C., 6 mi., to H. H. Thrasher of Knoxville, Tenn., approximate cost \$260,000; Hayne or Spartanburg Junction to Greer, S. C., 17 mi., to the Cornell-Young Co. of Greenville, S. C., and Greer to Greenville, S. C., 13 mi., to the Morrow Construction Co. of Atlanta, Ga., the approximate cost of these last two contracts being \$1,168,000.

N. C., Todd.—The Virginia-Carolina Ry. Co. has not taken any definite steps toward making the contemplated extension from Todd to Boone, N. C., about 16 mi. George P. Johnson of Abingdon, Va., is Prest. and Gen. Mgr.

Tenn., Onelda.—Harriman Construction Co. of Harriman, Tenn., has contract for extension of Tennessee Ry. from Onelda, 8 mi. toward Petros, with 3 mi. of branches. C. W. Butts, Onelda, is Chief Engr.

Tenn., Knoxville.—A railroad spur 4½ mi. long is to be built from Halls Station, on the Southern Ry., to a new marble quarry near Neberts Springs. H. H. Thrasher of Knoxville is Prest. of the East Tennessee Marble Co., which is interested. Estimated cost of construction about \$60,000.

Tenn., Nashville.—Tennessee Electric R. R. Co., capital stock \$50,000, is chartered to consolidate the Cumberland Valley, the Tennessee & Kentucky and the Nashville, Springfield & Northern plans for electric railways out of Nashville and to proceed immediately with construction of the Cum-

berland Valley line from Nashville to Smithville and Sparta, Tenn., about 70 mi. Total projected lengths 275 mi. Incorporators, Lee Baker, Wm. Myers, Saml. W. Thompson, E. G. Stribling, Robert C. Leonard and H. L. Shoulders. The Southern Finance & Construction Co. is named as having arranged the financing.

Tenn., Smithville.—An election is to be held Aug. 12 on \$150,000 of DeKalb county bonds to aid construction of the Nashville & Eastern Ry. from Nashville to Smithville, about 55 mi. George Puckett is Chrmn. and Brown Davis Secy. of bond committee. Chas. Edwards represents the railroad.

Tex., Dallas.—Dallas & Southwestern Traction Co., according to a report quoting J. O. Andrewartha, Consult. Engr., has made all financial arrangements for the construction of a system of interurban railways several hundred miles long. This will include a trunk line from Dallas to Austin, with branches to San Angelo, Brownwood, Lockhart, San Antonio, and probably other points. Dallas & Northwestern Traction Co. of the same interests is preparing to build from Dallas to Denton, Tex.

Tex., Denison.—Missouri, Oklahoma & Gulf R. R. is preparing to build additional yards at Denison. Wm. Coughlin, Muskogee, Okla., is Gen. Mgr. for the Receivers.

Tex., Marshall.—Bryan Snyder, V-P. and Gen. Mgr. Marshall & East Texas Ry., is reported as saying that B. F. Yoakum and associates will take over the line and build an extension from Elysian Fields, Tex., to New Orleans, about 300 mi., and another extension from Winstonsboro to Paris, Tex., about 50 mi.

Tex., San Antonio.—Nothing definite has yet been decided concerning the building for the International & Great Northern R. R. of new yards 5 mi. south of San Antonio. This is an official statement with reference to a late press report that shops and yards would be established there.

Va., Norfolk.—Norfolk Water Front Belt Line Corporation is incorporated to build and operate a belt-line railroad in Norfolk; estimated length, 6143 feet; capital \$1000 to \$5000; A. P. Jones, Prest.; D. Lawrence Groner, V-P., and D. F. Watt, Secy. and Treas., all of Norfolk. Line will run from the Norfolk & Western Ry. tracks at Lamberts Point to the storage property of Jones & Co. in Atlantic City ward of Norfolk. Norfolk & Western will build it when the new company has obtained its rights of way.

Va., Petersburg.—Petersburg & Appomattox Ry., which proposes to build an interurban railway from Petersburg to Hopewell, has let construction contract to the Vaughan Construction Co. of Roanoke, Va., for about \$200,000. Work starts Aug. 12.

Va., Radford.—Grading is reported begun on Little River between Snowville and the mouth of Indian Creek for the Radford-Willis Southern Ry., which is to be 25 mi. long from Radford to Willis, Va. William Bros. Construction Co. of Roanoke, Va., is contractor. J. L. Vaughan is Prest. and T. W. Simpson Ch. Engr., Radford, Va.

W. Va., Fairmont.—Contract for the Fairmont-Helens Run Ry. has been let by the Western Maryland Ry. Co. to A. L. Anderson & Bros. of Altoona, Pa. Line will be 6.12 mi. long from near Chifton, on the Baltimore & Ohio R. R. along Helens Run to coal mines. H. R. Pratt, Baltimore, Chief Engr. A report from Fairmont says that the bid for the contract was \$400,000.

W. Va., Madison.—Chesapeake & Ohio Ry. denies recent press report that it would build an extension from Madison up Pond Fork of Coal River district.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Air Compressor.—See Ice Plant Machinery.—Albert B. Cowart.

Air Compressors.—See Granite (Monumental, etc.) Plant Equipment.—American Granite Co.

Air Compressor.—Thaw & Williams, 6th and Vine Sts., Cincinnati, O.—Price, for resale, on straight line air compressor; capacity 1000 to 1200 cu. ft. of free air per minute, good for 100 lbs. air and 100 lbs. steam pressure; preferably Ingersoll-Rand make; full particulars in first letter.

Bank Fixtures.—Dr. A. H. Boyd, Charleston, W. Va.—Catalogues of bank fixtures and vault door.

Banquette Construction.—Dept. of Public Finances, Accounting Division, New Orleans, La.—Bids until Aug. 17 to construct banquette work along several streets; plans and specifications on file with City Engr.; A. G. Kicks, Commr.

Blow-Pipe System.—Pine and Cypress Co., Alapaha, Ga.—Second-hand complete equipment (pipe and blower) blow-pipe system for handling sawdust and chips; good condition; state price.

Boiler.—W. M. Plummer, 224 9th St. S. E., Washington, D. C.—Vertical steam boiler; 2 or 3 H. P.; second-hand, good condition.

Boiler.—See Engine and Boiler.—H. L. Souder.

Boiler.—Polkton Lumber Co., Wadesboro, N. C.—Prices on boiler.

Boilers.—Commr. District of Columbia, Washington, D. C.—Bids until Aug. 12 to furnish and install 2 down-draft steel boilers, etc., in Emory School, Lincoln Ave. and Prospect St. N. E.; proposal forms, specifications and information obtainable from Chief Clerk, Engr. Dept., 427 District Bldg.

Boiler.—See Ice Machinery.—Alton B. Cowart.

Brass Letter Base.—E. H. Cone, Inc., Atlanta, Ga.—Brass raised letter base to 40 ft. of show window.

Bridge Construction.—Office State Highway Com., Richmond, Va.—Bids at office of Clerk of Patrick County, Stuart, Va., until Aug. 20 to construct steel bridge 89 ft. long over Dan River, 6 mi. from Meadowfield, and 1164 cu. yds. approach fill; plans and specifications on file at Clerk's Office, Stuart, and at above office; further information on application to G. P. Coleman, State Highway Commr., Richmond.

Bridge Construction.—Lawrence Brett, Engr., Board Drainage Comms., Wilson, N. C.—Bids until Aug. 28 for material and construction of single leaf plate girder highway Scherzer rolling lift bridge across outfall canal of drainage district in Hyde county; clear opening 40 ft.; plans and specifications on file office of Spencer & Spencer, Atty., Swan Quarter, N. C.; office of Lawrence Brett, Engr., and with Scherzer Rolling Lift Bridge Co., Chicago, Ill., and copies obtainable from Engr.

Building Material.—Dr. Riddick Ackerman, Walterboro, S. C.—All material necessary in erection of \$5000 frame dwelling.

Building Material.—Chas. T. Willis, Inc., builder, 286 8th Ave., New York.—Sub-bids on work for Rensselaer Polytechnic School at Troy, N. Y.; 7 dormitories and dining room; sub-bids to be in contractor's hands by Aug. 25.

Burners (Oil).—Southport Electric Light & Power Co., Southport, N. C.—Addresses of manufacturers of crude oil burners for boilers.

Canned Vegetables, etc.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids until Sept. 7 on 405,000 lbs. tinned apricots, 234,000 lbs. tinned lima beans and 540,000 lbs. tinned string beans, schedule 8640, delivery Boston, Brooklyn, Norfolk, Philadelphia; also bids opened Sept. 28 on 540,000 lbs. tinned corn and 1,325,000 lbs. tinned tomatoes, schedule 8641, same deliveries.

Cars.—Pennsylvania Equipment Co., 503 Coleman Bldg., Philadelphia, Pa.—25 to 30 second-hand double-deck stock cars.

Cars (Dump).—Atlantic Terra-Cotta Co., I. L. Redell, Purchasing Agent, Buckingham Ave. and High St., Perth Amboy, N. J.—Six V-shaped, all steel, double-side dump cars, 1 to 1½ yds. capacity; good condition; for 18-in. gauge track.

Clothing, etc.—See Provisions, etc.—Abelde Gryse.

Coal.—W. S. Barstow & Co. (controlling General Gas & Electric Co.), F. C. Rose, general purchasing agent, 50 Pine St., New York.—In market for 250,000 tons slack coal for delivery Easton, Pa., and vicinity; also 15,000 tons for delivery Binghamton, N. Y.

Coating Machinery (Carbon Paper and Typewriter Ribbons).—W. F. Thurmond, General Delivery, Richmond, Va.—Correspondence with manufacturers of machinery for coating carbon paper; also typewriter ribbons.

Concrete Work.—Port Comms., F. W. Bruce, Chief Engr., Jacksonville, Fla.—Bids until Aug. 16 to furnish material and build complete 3 concrete foundations for cotton compress equipment aggregating 250 cu. yds.; plans and specifications on file with F. W. Bruce, Chief Engr., Talleyrand Ave.

Corn Shellers and Shuckers.—See Elevator (Corn) Machinery.—H. A. Cook.

Corn Mill.—See Flour and Feed Mill Machinery.

Crane (Electric).—American Granite Co., Rion, S. C.—Prices on electric crane. (See Granite (Monumental, etc.) Plant Equipment.)

Culverts.—Clairborne County Road Commissioners, J. H. S. Morison, Chmn., Tazewell, Tenn.—Bids until Aug. 24 to supply county with culverts to be used in constructing various roads aggregating 100 mi.; bids to be accompanied by complete analysis of material to be used.

Drainage.—Comms., Drainage Dist. No. 2, Crittenden County, Crawfordsville, Ark.—Bids Aug. 23 to construct 37 ditches, containing about 5,022,000 cu. yds. earth; floating dredge work, excepting about 2 mi. 6-ft. bottom ditch work for teams; bids on work only as whole; plans and specifications at County Clerk's office, Marion, Ark.; with L. S. Swepston, Secy., Crawfordsville, and W. H. Newsum, Wynne, Ark.; no plans or specifications for distribution.

Drainage.—Drainage Committee, Moseley's Marsh Drainage Dist., W. P. Hardy, Secy., La Grange, N. C.—Bids Aug. 16 to construct drainage canal, about 4 mi. long, containing about 56,000 cu. yds.

Dredging.—U. S. Engr. Office, 309 Custom-house, Baltimore, Md.—Bids until Sept. 15 to dredge certain rivers and harbors on east shore of Chesapeake Bay; information on application.

Electric Motors.—Acme Hosiery Mills, D. B. McCrary, Prest., Asheboro, N. C.—Noiseless chain-driven electric motors.

Electric Motors.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids until Aug. 24 for delivering 2 D. C. motors at naval torpedo station, Newport, R. I. Apply for proposals to navy pay office, Newport, or to Bureau.

Electric Specialties.—Watson Violin-Piano Co., Jonesboro, Ark.—Addresses of manufacturers of electric specialties; wants special electric magnets.

Electrical Fixtures.—Office Comms., Dist. of Columbia, Washington, D. C.—Bids at office Secy. Board of Comms., Room 509, District Bldg., Washington, D. C.—Bids until Aug. 12 to furnish and install electrical fixtures in Western High School on 35th St. N. W., between R and Reservoir Sts.; proposal forms, specifications and information obtainable from Chief Clerk, Engr. Dept., Room 427, District Bldg.

Electrical Machinery.—See Pulverizing Machinery.—White Siliceite Co.

Elevator (Corn) Machinery.—H. A. Cook, care Crystal Ice & Bottling Co., Natchitoches, La.—Correspondence with manufacturers of corn elevator machinery, including corn shuckers and shellers.

Elevator.—Snow Lumber Co., High Point, N. C.—Bids on elevator for 3-story storage warehouse.

Engine.—Polkton Lumber Co., Wadesboro, N. C.—Prices on engine.

Engine (Traction).—See Road Machinery.—J. J. Davis.

Engine (Gasoline).—Atlanta Granite Co., 17 Fraser St., Atlanta, Ga.—Gasoline engine; 10 or 12 H. P.

Engine (Gas).—See Pulverizing Machinery.—White Siliceite Co.

Engine Tires and Springs, etc.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until Aug. 27 on engine tires and springs, malleable-iron castings, steel castings, car repair parts, manganese-steel tumbler, cold shuts, steel boiler tubes, bolts, rivets, stovepipe, cable clips, cable thimbles, twist drills, drill sockets and sleeves, taps, electrical fixtures, electric switches, copper wire cloth, hooks and eyes, cabin-door hooks, locks, foot bolts, valves, cocks, cock-hole covers, pipe fittings, anchors, band saws, scythe blades, butcher's blocks, water coolers, copper funnels, window glass, tarpaulins, sandpaper, emery cloth, bond paper, beeswax and lump chalk; blanks and general information relating to this circular (No. 959) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Engine and Boiler.—H. L. Souder, Abbeville, N. C., R. F. D. No. 3.—Steam engine and boiler for flour mill of 75 to 100 bbls. daily capacity.

Expansion Joint Filler.—See Inlets (Sewer), etc.—Chas. H. Hoyt.

Floors (Terrazzo).—Treasury Dept., Supervising Archt's Office, Washington, D. C.—Bids opened Sept. 1 for new terrazzo floors in certain lobbies and corridors of U. S. Custom-house, St. Louis, Mo.; drawings and specifications obtainable from custodian of building, St. Louis, or at this office at discretion; Jas. A. Wetmore, Acting Supervising Archt.

Flour and Feed Machinery.—Ether Roller Mills, Eli P. Freeman, Mgr., Ether, N. C.—Two complete 2-stand roller mills, 6x18 rolls, including double-scalper, 3 flour dressers for each mill; pulleys, shafting, belting; cleaner; 2 scourers—everything for mill except spouting; also corn mill and feed mill and crusher.

Gymnasium Equipment.—Girls' Latin School, 1217 St. Paul St., Baltimore, Md.—Catalogues of and information regarding gymnasium equipment for Swedish gymnastics.

Granite (Monumental, etc.) Plant Equipment.—American Granite Co., Felix Solana, Mgr., Rion, S. C.—Prices on electric crane, air compressors and motors, air pipes, shafting and belts for plant at Columbia, S. C.

Heaters.—Geo. Jenkins, County Supt. Schools, Charleston, W. Va.—Prices on school room heaters for schools.

Heater (Oil).—M. H. Hightower, Hogshead, Ga.—Prices on oil heater for heating water for bathhouse.

Heaters (Feed Water).—See Rim and Spoke Machinery.—John G. Duncan Co.

Ice Machinery.—Greenville Cotton Mills, Greenville, N. C.—Prices on equipment for 5-ton ice plant.

Ice Plant Machinery.—Alton B. Cowart, Lyons, Ga.—Prices on boiler, water pump, ammonia pump, air compressor. (Establishing 10-ton ice plant.)

Laundry Machinery.—J. M. Wood, Gate City Trust Co., Greensboro, N. C.—Catalogues and prices on laundry machinery.

Laundry Machinery, etc.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids until Aug. 24 for delivering laundry machinery, periscopes, brass pipe and steel billets at Navy-yard, Portsmouth, N. H. Apply for proposals to navy pay office, Portsmouth, or to Bureau.

Levee Construction.—Mississippi Levee Commr., W. L. Thompson, Chief Engr., Greenville, Miss.—Bids until Aug. 17 to construct 541,000 cu. yds. levee work; information on application.

Linoleum.—See Office Fixtures.—Wm. O. Bohnefeld.

Locks and Dams.—Comms. Everglades Drainage Dist., Tallahassee, Fla.—Bids until Aug. 24 to construct 3 locks and dams; plans, specifications, etc., obtainable for \$10; F. C. Elliott, Chief Drainage Engr.

Locomotive.—Musterfield Sand & Gravel Co., Richmond, Va.—Dinky locomotive; 30 to 35 tons; standard gauge; second-hand; located near Richmond preferred.

Lumber.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids until Aug. 24 on 10,000 ft. white oak, schedule 8634, delivery Washington; 14,000 ft. yellow flooring pine, schedule 8632, delivery Boston; 385 30-ft.-long chestnut telephone poles, schedule 8641, delivery Washington; 20,000 ft. Southern spruce boards, schedule 8633, delivery Brooklyn.

Machine Tools.—Dwight F. Hill, care Manufacturers Record, Baltimore, Md.—Following second-hand machine tools; in first-class condition; planer, 10 ft. bed, to swing 3 ft. to 4 ft.; drill press, 2 ft. table; small shaper; small milling machine.

Machine Tools.—A. J. Alsford Corp., 58 W. Randolph St., Chicago, Ill.—Following machines for export: Horizontal milling machine with universal tools, Brown & Sharpe No. 3, complete with tools; horizontal milling machine for rapid turning out of blade, and tool holders, simple machine of a type to be submitted by manufacturer; universal grinding machine, Brown & Sharpe No. 13, with tools; horizontal milling machine, Cincinnati or similar make No. 3; horizontal milling machine, Cincinnati or similar make No. 2; horizontal milling machine, Cincinnati or similar make No. 1; two vertical milling machines, Becker (Milling Machine Co., Hyde Park, Mass.) or similar make No. 4; three vertical milling machines, Kendall or Manchester or similar makes No. 3; lathe, Pratt & Whitney, with backing off or relieving arrangement for tools and screw caps, if possible with hand wheel, height of centers 200 millimeters, intermediate centers 1 meter, 50 centimeters with platform of 4 independent packing blocks, universal platform fixed and traveling stay; two lathes, height of centers 300, intermediate centers 1.350; two lathes, height of centers 200, intermediate centers 2.000; lathe, height of centers 300, intermediate centers 2.500; the foregoing 5 lathes are to be equipped each with sliding bar or sliding way, one cutting screw for French and English pitch, one fixed and one traveling stay, a platform with four independent packing blocks and a universal platform; semi-automatic lathe for 30 millimeter bars; semi-automatic lathe for 60 millimeter bars; 12 parallel lathes, type Lodge & Shipley, or similar construction, height of centers 300 millimeters, and of intermediate centers 2 meters, with one platform of four independent packing blocks, 1 universal platform, 1 fixed and 1 traveling stay; these lathes to be adjusted for French pitch; 8 lathes, parallel construction, Dean Smith, Grace or similar type, height of centers 250 millimeters, intermediate centers 2 meters, 50 centimeters, equipped with a bed with gap, perforated spindle for passing of bars of about 80 millimeters, sliding way, cutting screw and platform with four independent packing blocks, universal platform, one fixed and one traveling stay; 9 sliding lathes, strong and simple in construction, height of centers 250 millimeters, intermediate centers 1500 millimeters, equipped with a bed with gap, sliding way, without guide screw, platform with four independent packing blocks, one fixed and one traveling stay; 2 parallel lathes, height of centers 300 millimeters, intermediate centers 2000 millimeters; parallel lathe, height of centers 300 millimeters, intermediate centers 3.500 millimeters, sliding way, cutting screw, one platform with four independent packing blocks, one universal platform, one fixed and one sliding or traveling stay; rectifying and grinding machine, type Landis, height of centers 190 millimeters, intermediate centers 1200 millimeters; cutting machine for milling machine, type Pratt & Whitney, with milling tool holder, permitting the use of multiple tools, with interior milling device, type of the machine, Pratt & Whitney No. 43 of current series.

Metal Curb Reinforcement.—See Inlets (Sewer), etc.—Chas. H. Hoyt.

Metal Louvers, etc.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until Aug. 31 to furnish metal louvers, wooden cargo-handling booms with fittings, railroad track scales, engine, tires, horseshoes, nails, bolts, twist drills, taps, files, picks, chisels, copper tubing, sheet zinc, chain bolts, chain blocks, varnish brushes, scrub brushes, lantern globes, suction hose, manila rope, towels and white oak lumber; blanks and general information relating to this circular (No. 960) may

be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and Fort Mason, San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Mill and Builders' Supplies, etc.—Kimbrough Bros., manufacturers and distributing agents, Jennerette, La.—Correspondence with manufacturers, view to representation; will handle supplies and materials, including following: Mill and builders' supplies, railway material, hardware, coal, sand, gravel, oils, greases, lumber, shingles, lath, paints; manila, sisal and wire rope; flour, feed, groceries, etc.

Nailbook.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Aug. 17 on 600,000 yds. white checked nailbook, schedule 8631, delivery Charleston, S. C.

Office Fixtures.—Wm. O. Bohnefeld, Box 481, Tulsa, Okla.—Prices on office fixtures for cleaning plant; wall cases, linoleum, desks, tables, etc.

Office Supplies and Equipment, etc.—Chester Herbert Buck, expert accountant, Chattanooga, Tenn.—Correspondence with manufacturers with view to local sales agencies; especially interested in office supplies and equipment.

Paving.—Board of Aldermen, Newbern, N. C.—Bids until Aug. 16 to repair and resurface present bituminous pavement on lower Pollock and E. Front Sts.; about 11,000 sq. yds.; material to be asphalt with gravel, fine stone or stone screenings; G. T. Patterson, City Clerk; R. R. Eagle, Engr.

Paving.—City Commrs., St. Petersburg, Fla.—Bids until Aug. 12 to pave with second-class vitrified brick, curb with granite or concrete and grade to 18th St. north from Central Ave. to Third Ave. north; specifications on file with W. F. Divine, City Clerk.

Paving.—Dept. of Public Finances, Accounting Division, New Orleans, La.—Bids until Aug. 17 to pave sidewalks, construct sub-surface drains, curbs and gutter bottoms on Roosevelt Pl. from Dumaine to Orleans St.; plans and specifications on file with City Engr.; A. G. Ricks, Commr.

Paving.—Street Committee, Concord, N. C.—Bids until Aug. 14 to pave streets estimated to cost \$5829.41; plans and specifications on file with Reece Ira Long, City Engr.

Planing Machine.—Polkton Lumber Co., Wadesboro, N. C.—Prices on planing machine.

Planer.—See Machine Tools.—Dwight F. Hill.

Plumbing.—Baltimore (Md.) Board of Awards.—Bids until Aug. 18 for remodeling plumbing and toilet-rooms at schools Nos. 9, 11, 14, 15, 19, 30, 48, 60, 61, 74, 75, 94, 112 and 118; drawings and specifications on file with C. E. Stubbs, Bldg. Inspector.

Plush and Velure.—Israel Rhodes, care Monteleone Hotel, New Orleans, La.—Jobbers' prices on plush and velure for window decoration; could use many thousand yards.

Power-house Construction.—Paul Egan, Archt., Charleston, W. Va.—Information on power house construction; for hydro-electric plant.

Press (Drill).—See Machine Tools.—Dwight F. Hill.

Provisions, etc.—Abelde Gryse, West Falls Church, Va.—Interested in provisions (food, clothing, etc.) suitable for supply of army and people near front; for possible extensive order from Belgian Government.

Pulverizing Machinery.—White Silicomite Co., Robt. R. Zell, Mgr., 5 Watts Bldg., Birmingham, Ala.—Receiving prices on pulverizing machinery for mill to pulverize and bag 50 tons barytes or silicomite daily; prefer tube mill; use gas or electric power.

Pump.—Park Commrs., Louisville, Ky.—Bids until Aug. 11 to furnish automatic centrifugal pump with motor, to be used in connection with drainage of underpass on Eastern Parkway; general specifications and sketch on file with Park Engrs., Stonestreet & Ford, Louisville Trust Bldg.; Harry S. Smith, business director.

Pumps.—See Ice Plant Machinery.—Albert B. Cowart.

Balls (Steel).—Ronda Coop & Egg Case Co., Ronda, N. C.—Addresses of manufacturers of steel balls for bearings.

Rim and Spoke Machinery.—John G. Duncan Co., 308 W. Jackson Ave. (Box 265), Knoxville, Tenn.—Dealers' and consumers' prices on rim jointer, Delancey spoke lathe and 12 H. P. feed-water heater; all good order.

Road Construction.—Harford County Commrs., W. A. Wheeler, Clerk, Belair, Md.—Bids until Aug. 16 to construct 1.3 mi. highway upon or along Norrisville and Lancaster Rd. between Norrisville and Pennsylvania State line; plans can be seen and forms of specifications obtained for \$1 at office State Roads Com., Garrett Bldg., Baltimore.

Road Construction.—Somerset County Commrs., John E. Holland, Clerk, Princess Anne, Md.—Bids until Sept. 7 to construct section State-aid highway upon or along Eden Rd. from Allen to Eden for 2.01 mi.; bids to be made on blank forms, obtainable from State Roads Com., Garrett Bldg., Baltimore; plans can be seen and forms of specification and contract obtained for \$1 from State Roads Com.

Road Construction.—Highway Dept., Board of State Engrs., Room 104, New Orleans Court Bldg., New Orleans, La.—Bids until Aug. 16 to gravel about 26 mi. of highway in Road Dist. No. 1; information as to character of work, location, etc., obtainable from Highway Dept.; W. E. Atkinson, State Highway Engr., New Orleans.

Road Construction.—Washington County Commrs., Barry M. Hartle, Clerk, Hagerstown, Md.—Bids until Aug. 17 to construct State-aid highway upon or along bed of county road, 1 mi. east through Fiddlersburg for 1.6-10 mi.; road leading from Cearfoss to Fairview for 1 mi. and on bed of county road leading from St. Paul's Church to McLaughlin schoolhouse for 1.56 mi.; bids to be made on blank forms, obtainable from State Roads Com., Garrett Bldg., Baltimore; plans can be seen and forms of specification and contract obtained for \$1 from State Roads Com.

Road Machinery.—J. J. Davis, County Commr., Lawton, Okla.—Prices on traction engine and grader.

Roofing and Cornice Materials.—Weeks Roofing & Cornice Co., Durham, N. C.—Catalogues, samples and prices on roofing and cornice materials.

Sack Machinery.—Rafael Quintero Paoli, Estudiante de Derecho, Campeche, Mex.—Addresses of manufacturers of machinery to make sacks (bushel or larger capacity), using sisal hemp (binder twine) of Mexican local growth.

Sand-handling Machinery.—F. H. Haskell, C. E., 702 Palmetto National Bldg., Columbia, S. C.—Addresses of manufacturers of sand-handling machinery.

Saw.—Wilmington Iron Works, Wilmington, N. C.—Heavy hand rip saw; must use 2-in. blades and have no resaw rolls with it.

Sawdust, etc.—Charles R. Fife Co., 1012 Central National Bank Bldg., St. Louis, Mo.—Quantity of sawdust; also straw, packed in bags and baled; with price and particulars.

Sawmill.—Curry Bros. Lumber Co., Ridgeway, Pa.—Prices on new or second-hand band sawmill, complete, for installation near Stackhouse, N. C.

Sewer Inlets, etc.—Chas. H. Hoyt, 514 Evans Bldg., Washington, D. C.—Prices on storm-water inlets, prepared expansion joint filler and metal curb reinforcement.

Sewer Construction.—Chas. E. Bolling, City Engr., Richmond, Va.—Bids until Aug. 10 to enlarge certain sewers; proposal forms obtainable on application.

Sewer Construction.—City Commrs., Tulsa, Okla.—Bids until Aug. 16 to construct storm sewer system with necessary catch-basins, manholes, etc., for draining section of Main St.; plans and specifications on file with E. B. Cline, City Auditor.

Sewer Construction.—City Council, Parkersburg, W. Va.—Bids until Aug. 18 to construct 8-in. sanitary sewers, including Y branches, manholes, house connections, etc., on Liberty, 23d and Lee Sts. and Clement Ave.; plans and specifications on file with City Engr.; Frank Good, City Clerk.

Sewer Construction.—City Council, Ocala, Fla.—Bids until Sept. 14 to construct sanitary sewer system; 5788 ft. 6-in., 101,315 ft. 8-in., 8145 ft. 10-in., 2215 ft. 12-in., 3480 ft. 15-in. and 260 ft. 18-in. sewer pipe, 237 manholes, 51 automatic flush tanks, 37 hand flush tanks, Y branches and sewerage-disposal system; plans and specifications on file with H. C. Sistrunk, City Clerk, and J. B. McCrary Co., Engr., 1408-1417 Third National Bank Bldg., Atlanta, Ga.; bidding blanks obtainable from Engrs. and City Clerk; copies of plans and specifications obtainable from Engrs. for \$5 per set.

Sprinkler System.—Snow Lumber Co., High Point, N. C.—Bids on sprinkler system for storage warehouse; 25x75 ft.; 3 stories.

Straw.—See Sawdust, etc.

Stack.—Board of Public Works, Tampa, Fla.—Invites bids until Aug. 24 to build incinerator stack.

Steel Tubing, etc.—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids until Aug. 24 for delivering upholstery leather, Indian red and steel tubing at Navy-yard, Norfolk, Va. Apply for proposals to navy pay office, Norfolk, or to Bureau.

Sulphuric Acid and Superphosphate Plants.—Thomas W. Deakes, Empire Bldg., (P. O. Box 226), Auckland, New Zealand.—Quotations on complete sulphuric acid and superphosphate plants; wants plant with capacity of 60,000 tons superphosphate (annually) and 20,000 tons sulphuric acid, and to embrace American ring pulverizer manufactured by American Pulverizer Co., East St. Louis, Ill. Send quotations by mail or by cable (address "Reliance") before September 10.

Tanks (Steel, etc.).—Navy Dept., Bureau Supplies and Accounts, Washington, D. C.—Bids opened Aug. 24 for 3 air receiver tanks, schedule 8632, delivery Philadelphia, and 10 1/2-in.-thick steel tanks, schedule 8628, delivery Washington.

Tile (Cement Roofing) Machinery.—Hervey T. Krause, Govans, Md.—Data and prices on machinery to manufacture cement roofing tile.

Trimmer.—Polkton Lumber Co., Wadesboro, N. C.—Prices on trimmer.

Water System.—Board of Control, Norfolk, Va.—Bids until Aug. 13 to furnish material and lay water mains, place hydrants, valves, etc., on various streets; specifications and instructions to bidders obtainable from W. H. Taylor, Jr., City Engr.

Woodworking Machinery.—See Trimmer. See Planing Machine.

Woodworking Machinery.—See Rim and Spoke Machinery.—John G. Duncan Co.

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

FINANCIAL CORPORATIONS

Ark., Marshall.—Arkansas National Bank has made application to organize; capital \$25,000; organizers, E. B. Treece, Z. V. Ferguson, H. Treece, J. E. Treece, W. H. Jennings and others.

D. C., Washington.—Community Savings & Loan Co. has filed articles of incorporation; capital \$50,000; offices will be at 1497 New York Ave. N. W.; Trustees, Anson S. Taylor, William Frank Thyson, Harry B. Denham, Charles L. Bowman, Christian K. Mount, John Doyle Carmody, Victor J. Evans and others.

Fla., Dade City.—Bank of Dade City has made application for charter; capital \$25,000; incorporators, J. M. Harvey, Tampa, Fla.; L. E. Bessenger, Eli T. Vaughn and E. Tomas, all of Dade City.

Fla., Orlando.—A bank and trust company is to be established, it is reported, by A. B. Cook & Co., Fitzgerald, Ga.

Ga., Macon.—The Empire Investment Co. has made application for charter; capital \$30,000; petitioners, A. Samuels of Fulton county and E. W. Gould of Bibb county.

Ky., Carrollton.—The German-American and First National banks have consolidated under the name of the First National Bank of Carrollton; capital \$100,000. J. A. Donaldson is Pres.

Ky., Murray.—The First National Bank of Murray, capital \$25,000, is organized with the following directors: W. H. Finney, Prest.; Dr. B. B. Keys, V.-P.; T. H. Stokes, Cash; M. A. Thomas, W. E. Marberry, J. W. Wade and Joe T. Parker. Business is to begin about Sept. 10.

La., Caddo.—Standard Loan Co. incptd., capital \$5000; organizers, T. L. Hammet, C. A. Wilson and U. C. Addison.

La., Winnfield.—The First National Bank of Winnfield is chartered; capital \$25,000; M. M. Fisher, Prest.; A. L. Bryan, Cash.

S. C., Columbia.—Fiduciary & Security Corporation is chartered; capital \$4000; John

W. Lillard, Prest. and Treas., and Geo. A. Collet, Secy.

S. C., Mullins.—Union Trust Co. incorporated; capital \$10,000. Directors: W. L. Adden, Prest.; Noah H. Jenerette, Secy. and Treas., and W. D. Jenerette. Business is to begin Sept. 1.

Tenn., Jackson.—Postal Employees' Bank is chartered; capital \$15,000; organizers, M. F. Swearingen, R. F. Phillips, R. C. Higgins, L. L. Fenville and T. D. Almond.

Tex., Dallas.—The Merchants' National Bank and the Citizens' State Bank & Trust Co. have merged under the name of the latter institution, the consolidation having taken effect Aug. 3; R. C. Ayres, Prest.; J. P. Smith, V.-P.; M. E. Martin, Active V.-P., and J. H. Blocker, Cash.

Va., Hopewell.—Virginia State Bank is chartered; capital \$15,000 to \$30,000; Lawrence Perry, Prest.; J. W. Phillips, V.-P., and Samuel A. Morris, Secy. and Cash.

Va., Richmond.—Lecky Insurance Agency, Inc., capital \$2500 to \$15,000; Robert Lecky, Jr., Prest.; M. T. Goddin, Secy.

W. Va., Ravenswood.—First National Bank of Ravenswood chartered; capital \$35,000; Wm. M. Arnold, Prest., and E. A. Bartels, Cash. Business has begun.

W. Va., Ridgeley.—People's Bank of Ridgeley has begun business; capital \$50,000. J. T. Vandergrift, Prest.; F. E. Mower, V.-P.; L. P. Walker, Cash.; Howard R. Kight, R. A. Radcliffe, Jonathan Radcliffe, W. L. McFarland, J. E. Polling, Robert D. Hieronimus, H. F. Colehand and C. S. Ward, directors.

NEW SECURITIES

Ark., Crawfordville.—Bids will be received until 11 A. M. Aug. 23 for \$500,000 4 per cent. 20-year bonds Drainage Dist. No. 2, Crittenden county; dated Aug. 1, 1915. L. S. Sweepston is Secy. Board of Commrs. Further particulars will be found in the advertising columns.

Ark., Stuttgart.—Issue of 6 per cent. 1-1/2-year bonds Street Improvement No. 1 have been purchased by the Missouri State Life Insurance Co., St. Louis, at par.

Fla., Arcadia.—No satisfactory bids were received Aug. 2 for \$350,000 bonds Special Road and Bridge Dist. No. 5, DeSoto county, and new bids will be received until 2 P. M. Sept. 7. A. L. Durranne is County Clerk.

Fla., Arcadia.—\$20,000 6 per cent. 15-30-year bonds Bowling Green Special Tax School Dist. No. 10, DeSoto county, have been purchased by the State of Florida.

Fla., Arcadia.—All bids received Aug. 1 for the following 6 per cent. DeSoto county school bonds were rejected and they will be offered at private sale: \$12,500 3-year Popash Special Tax School Dist. No. 4, \$12,500 15-30-year; Owens Special Tax School Dist. No. 7, \$2000 10-year; Charlotte Harbor Special Tax School Dist. No. 34, \$8000 10-20-year; denomination \$500; dated Aug. 1, 1915. Address Jas. O. Bickley, Secy. Board of Public Instruction DeSoto County.

Fla., Bartow.—Election is to be called in Polk county to vote on road bonds. Address County Commrs.

Fla., Bradenton.—Bids will be received until Aug. 16 for \$250,000 6 per cent. 20-year Sarasota-Venice Dist. road and bridge bonds; dated July 1, 1915. Robert H. Roesch is Clerk Board of Commrs.

Fla., Deland.—Commrs. of Volusia County have been petitioned to call an election to vote on \$155,000 road and bridge bonds Dist. No. 5, Volusia county. S. D. Jordan is Clerk County Court.

Fla., Dunedin.—Election will be held Sept. 14 to vote on \$25,000 of bonds for the following purposes: \$5500 for sanitary sewers and disposal plant; \$3600 for paving; \$4600 for water-distribution system, and \$4800 for construction of public pier. Walter Bull is Mayor.

Fla., Ft. Myers.—\$75,000 of an issue of \$177,500 6 per cent. bonds Road and Bridge Dist. No. 1, Lee county, have been purchased by C. C. Pursley, Agt., for a Northern firm. H. A. Hendry is Clerk, County Commrs.

Fla., Fort Pierce.—\$60,000 6 per cent. 1-1/2-year St. Lucie county road bonds have been purchased at \$58.65 and accrued interest by Bank of Fort Pierce, at Fort Pierce, Fla.

Fla., Jacksonville.—Election is to be held in Duval county Sept. 21 to vote on \$300,000 5 per cent. \$1000 denomination bonds to cancel outstanding indebtedness. Address County Commrs.

Fla., Kissimmee.—The following bonds have been voted: \$12,000 for brick roads and

[For Additional Financial News, See Page 64.]

Merchants-Mechanics National Bank

South and Water Sts., BALTIMORE, MD.
DOUGLAS H. THOMAS, President.
JNO. B. RAMSAY, V.-P. and Chm. Bd. of Dir.
JOHN B. H. DUNN, Cashier.
Capital \$2,000,000. Deposits \$21,670,000
Surplus and Profits \$2,175,000.
Accounts of Banks, Bankers, Corporations and Individuals solicited.
We invite correspondence.

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BANKING AND TRUST department gives special attention to out-of-town customers' accounts.

TITLE DEPARTMENT examines and guarantees title to realty throughout Delaware.

REALTY DEPARTMENT has sites for manufacturing industries. Modern methods of management of property.

J. ERNEST SMITH, Pres. and Gen. Counsel.
WM. G. TAYLOR, Vice-Pres. and Treasurer.
HARRY W. DAVIS, Vice-Pres. and Secretary.
W. W. PUSEY, 2d Title and Real Estate Officer.

The National Exchange Bank

OF BALTIMORE, MD.

Hopkins Place, German and Liberty Sts.

Capital, \$1,500,000.

March 30, 1915, Surplus and Profits, \$850,000.00.

OFFICERS.

WALDO NEWCOMER, President.
SUMMERFIELD BALDWIN, Vice-Pres.
R. VINTON LANSDALE, Cashier.
C. G. MORGAN, Asst. Cashier.
Accounts of Mercantile Firms, Corporations, Banks, Bankers and Individuals Invited.

First National Bank

RICHMOND, VIRGINIA

Capital and Surplus - - - - - \$3,000,000

JNO. B. PURCELL, President.

JNO. M. MILLER, JR., Vice-Pres.

W. M. ADDISON, Cashier.

The First National Bank

OF KEY WEST, FLA.

United States Depository and Disbursing Agent.

Capital - - - - - \$100,000

Surplus and Undivided Profits - 40,000

A general banking business transacted.

Special attention given to collections.

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First National Bank Building, CHICAGO

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49 Wall Street, New York

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CHARLES L. HEHL, C. P. A., President JOHN KUCHLER, C. P. A., Vice-President
ERNEST E. WOODEN, C. P. A., Sec. and Treas.

BALTIMORE AUDIT COMPANY

901-903 Calvert Building

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Announce the Opening of an Office at
ATLANTA—Mr. L. C. Matthews, Manager

And an Office at
DENVER—Mr. C. H. Banks, Manager

\$15,000 for retiring city indebtedness. Address The Mayor.

Fla., Lake Worth.—\$25,000 of an issue of \$75,000 light and water 6 per cent. 20-year bonds are being offered; denomination \$10; dated Dec. 13, 1914; maturity 1934. Address A. H. Shipman, Vice-Mayor.

Fla., Miami.—\$100,000 Dade county highway bonds have been purchased by E. C. Speer & Son, Chicago.

Fla., Miami.—Election is to be held Sept. 21 to vote on \$360,000 ship-channel construction, \$40,000 local railway, \$50,000 sanitary sewer, \$175,000 bridge and \$20,000 hospital bonds. J. W. Watson is Mayor and W. B. Moore, City Clerk.

Fla., Palatka.—Election is to be held in Putnam county Sept. 14 to vote on \$308,000 Palatka Dist. road bonds. Address County Commrs.

Fla., Pensacola.—\$30,000 6 per cent. 10-year water, fire and street-improvement bonds have been purchased at \$755 premium by A. Lischko of Pensacola.

Fla., Port of St. Joe.—No satisfactory bids were received Aug. 3 for the \$4000 5 per cent. bonds Special Tax School Dist. No. 16; dated Aug. 2, 1915; maturity 1924 to 1931, inclusive. New bids will be opened Sept. 6. J. F. Durham is Supt. Calhoun County School Board.

Fla., Sunterville.—Election is to be held in Sunter county in October to vote on \$250,000 road bonds. Address County Commrs.

Fla., Tavares.—\$2000 6 per cent. 15-year school district school-building bonds have been sold at par as follows: First State Bank of Eustis, Fla., \$1000; Board of Public Instruction Lake County, \$1000. Wm. T. Kennedy is Supt. of Schools.

Fla., Titusville.—Election is to be held Sept. 20 to vote on \$35,000 6 per cent. 20-year bonds for purchase of Titusville Electric Light Co. L. W. Doolittle is Mayor.

Fla., Titusville.—Election is to be held in Brevard county Sept. 14 to vote on \$160,000 6 per cent. 25-year bonds Special Tax School Dist. No. 1. E. Svedelius is Chrmn. Board of Public Instruction Brevard County. A recent report stated election would be held Aug. 10. It is stated that if the election carries F. A. Gill has offered to purchase the bonds at \$2500 premium.

Fla., West Palm Beach.—Bids will be received until noon Sept. 7 by Board of Commissioners Palm Beach County for \$750,000 road and \$50,000 refunding 5-20-year county bonds. W. A. Dutch is Special Bond Commissioner. Further particulars will be found in the advertising columns.

Ga., Atlanta.—Election is to be held Sept. 20 to vote on \$1,000,000 school, \$750,000 water-works improvement, \$133,000 fire department, \$1,000,000 sewer and disposal plant, \$100,000 cyclorama building, and \$375,000 Grady Hospital bonds. Address The Mayor.

Ga., Rome.—Election will probably be held in Floyd county Sept. 6 to vote on bridge and hospital bonds. Address County Commissioners.

Ga., Tallapoosa.—\$35,000 water-works, \$25,000 school and \$5000 sewer-improvement bonds have been validated by Supreme Court. O. E. Pearce is Mayor.

Ga., Waycross.—Election is to be held Sept. 20 to vote on \$25,000 5 per cent. 20-year bonds in aid of Young Men's Christian Association. Address The Mayor.

Ky., Jamestown.—Election is to be held in Russell county Aug. 21 to vote on \$40,000 road and bridge bonds. Address County Commrs.

Ky., Lexington.—Election is to be held Sept. 30 in Fayette county to vote on \$300,000 5 per cent. road and bridge bonds; denominations not less than \$100 or more than \$1000. Address County Commrs.

Ky., Newport.—Bids will be received until noon Aug. 16 by Chas. D. McCrea, Commr. of Finance, for the following 5 per cent. sewerage bonds: \$1350 Dist. C, 4-8-year; \$600 Dist. D, 9-10-year; \$6900 Dist. E, 1-11-year; dated July 1, 1915.

La., Delidder.—Bids are being received by J. M. Cox, Mayor, for \$24,000 5 per cent. \$500 denomination water bonds, maturing May 1, 1916 to 1935, inclusive.

La., Leesville.—\$35,000 Rosepine School Dist., Vernon parish school-building bonds are voted. Address Police Jury.

La., Oberlin.—Bids will be received until 1 P. M. Sept. 13 for \$150,000 5 per cent. Allen parish road district No. 5 road and bridge bonds. Address Police Jury, C. Lindsey, Clerk. Further particulars will be found in the advertising columns.

Md., Ocean City.—\$12,000 sewer bonds are to be issued. Address The Mayor.

Miss., Clarksdale.—Date for opening bids for \$150,000 5 per cent. \$500 denomination city hall, school, fire station, light and sewer bonds is postponed until Aug. 17; dated Sept. 1, 1915; maturity 1921 to 1935. Address City Commrs., W. M. Purnell, Clerk.

Miss., Columbus.—\$50,000 road bonds Supervisors' Dist. No. 4, Lowndes county, are voted. Address County Commrs.

Miss., Hattiesburg.—City has for sale \$5000 5 per cent. 20-year school bonds of Eatonville Consolidated School Dist., Forrest county. Address W. F. Jones, Route 1, Box 48.

Mo., Jefferson City.—Election to vote on \$100,000 road, \$25,000 tuberculosis hospital and \$25,000 jail bonds. Cole county, will be held Oct. 19. Address County Commrs.

Mo., Lexington.—\$6000 Lafayette county school bonds defeated.

Mo., Rogersville.—\$5700 school bonds are voted. Address Board of Education.

Mo., Joplin.—Election is to be held Aug. 31 to vote on \$13,500 N. Main St. viaduct construction bonds. Address The Mayor.

N. C., Albemarle.—Bids will be received until 4 P. M. Sept. 6 by E. L. Hearne, City Treas., for \$30,000 5 1/2 per cent. 20-year sewerage bonds. M. J. Harris is Mayor.

N. C., Asheville.—Election will be held Nov. 2 to vote on \$250,000 school bonds. J. E. Rankin is Mayor.

N. C., Gastonia.—\$100,000 road and \$50,000 5 per cent. \$1000 denomination funding bonds are voted by Gaston county. A. J. Smith is Clerk Board County Commrs.

N. C., Goldsboro.—\$90,000 Nahunta Swamp Drainage Dist., Wayne county, bonds are being offered. Address W. W. Pierce.

N. C., Lumberton.—Bids will be received until noon Sept. 2 for \$25,000 5, 5 1/2 or 6 per cent. 30-year light and water bonds. Denomination to suit purchaser. Address Board of Commrs., G. T. Page, Treas. Further particulars will be found in the advertising columns.

N. C., Raleigh.—Election is to be held Sept. 14 to vote on \$100,000 5 per cent. 30-year Raleigh township, Wake county, school bonds. Address County Commrs.

N. C., Roxboro.—\$15,000 5 per cent. 20-year street bonds are being offered. Address C. C. Cunningham, Clerk. Further particulars will be found in the advertising columns.

N. C., Salisbury.—\$125,000 water system, \$55,000 school and \$20,000 street and sewer bonds are voted. Address The Mayor.

N. C., Wilson.—\$95,000 water, \$75,000 gas and \$80,000 street bonds are soon to be placed on the market. Address The Mayor.

Okla., Claremore.—Bids will be received until 5 P. M. Aug. 16 for \$15,000 5 per cent. 25-year \$500 denomination park and fair ground bonds. Address L. S. Ryan, City Atty. J. Ryan is Mayor.

Okla., Chelsea.—\$30,000 6 per cent. sewer bonds have been purchased at par by W. F. Power. Address The Mayor.

Okla., Drumright.—\$25,000 6 per cent. water-works bonds have been sold. Address The Mayor.

Okla., Marshall.—Bids will be received until Aug. 16 for \$30,000 water-works and \$5000 electric-light 6 per cent. 25-year bonds; denomination \$500. Address G. F. Ingle, Prest. Board of Trustees.

Okla., Okmulgee.—Petitions are being circulated in Okmulgee county calling for an election to vote on \$125,000 courthouse bonds. Address County Commrs.

Okla., Pond Creek.—\$7000 6 per cent. 20-year water and light improvement bonds have been sold. Address The Mayor.

S. C., Chesterfield.—\$5000 Middendorf School Dist., Chesterfield county, bonds are voted. Address Board of Trustees.

S. C., Florence.—\$40,000 street-improvement, \$140,000 refunding and \$52,000 school bonds have been purchased at \$2345.91 premium by the First National Bank, Florence.

S. C., Greenwood.—Bonds for following purposes have been voted: \$100,000 for street paving and \$35,000 for school and retiring outstanding indebtedness. Address The Mayor.

S. C., Walterboro.—\$15,000 water-works and electric-light bonds are voted. H. W. Black, Jr., is Chrmn. Board of Public Works.

Tenn., Camden.—\$30,000 5 per cent. 20-year school bonds have been purchased by L. M. Weathers of Memphis.

Tenn., Chattanooga.—\$80,000 5 per cent. 30-year \$1000 paving bonds, dated Aug. 1, 1915, and maturing 1936, have been purchased at \$220 premium by Seasongood & Mayer, Cincinnati, O.

Tenn., Decatur.—Election is to be held in Meigs county Sept. 2 to vote on \$100,000 road-improvement bonds. Address County Commrs.

Tenn., Harriman.—\$84,000 5 1/2 per cent. \$1000 denomination funding bonds have been purchased by Stacy & Braun, Toledo, O., at \$565.48 premium.

Tenn., Huntsville.—Election Aug. 12 to vote on \$300,000 Scott county road-construction bonds. Address County Commrs.

Tenn., Johnson City.—Election is to be held Sept. 2 to vote on \$37,500 city hall and \$25,000 market-house bonds. Address Thos. P. Boone, Secy.-Mgr. Chamber of Commerce.

Tenn., Livingston.—\$160,000 Overton county road bonds defeated.

Tex., Pecos.—Bonds for Reeves County Irrigation Dist. No. 1 have been voted. Address County Commrs.

Tenn., Newport.—\$23,000 electric-light bonds are soon to be placed on the market. Address The Mayor.

Tenn., Rutledge.—Election is to be held in Grainger county Sept. 9 to vote on \$200,000 road bonds. Address County Commrs.

Tenn., South Fulton.—Election is to be held Sept. 4 to vote on \$5000 6 per cent. 20-year water bonds. Dunlap Murphy is Clerk.

Tenn., Springfield.—\$15,000 power-house equipment bonds have been purchased by the Nashville Trust Co., Nashville.

Tenn., Union City.—Election is to be held Aug. 21 to vote on \$15,000 city hall bonds. Address The Mayor.

Tenn., Winchester.—Election is to be held in Franklin county to vote on \$350,000 pike bonds. Address County Commrs.

Tex., Austin.—\$725,000 5 per cent. 20-year street, bridge, school and sewer bonds have been purchased by Bolger, Mosser & Williams of Chicago at par and accrued interest to date of delivery.

Tex., Austin.—The Attorney-General has

approved the following securities: \$40,000 5 1/2 per cent. 20-year series A bonds Live Oak county; \$38,000 5 1/2 per cent. bonds Brazoria Road Dist. No. 9; \$40,000 5 per cent. 5-40-year Medina county road-improvement bonds; \$4000 5 per cent. 10-40-year bonds Concho Common School Dist. No. 8; \$800 5 per cent. 5-25-year bonds Henderson County Common School Dist. No. 49 1/2; \$862,000 5 per cent. 30-40-year Grayson county road-improvement bonds; \$30,000 5 per cent. 20-40-year DeWitt county road bonds.

Tex., Beeville.—\$15,000 5 per cent. 30-year \$500 denomination sewer bonds have been purchased by William P. Bonbright & Co., Detroit, Mich., at par, accrued interest and premium of \$25.

Tex., Galveston.—Election is to be held in September to vote on \$300,000 school bonds. It is probable that \$500,000 paving and drainage bonds will also be voted on. Address The Mayor.

Tex., Jefferson.—The \$23,000 \$500 denomination bonds School Dist. No. 7, Marion county, to be voted on Aug. 17 are 30-year 5 per cent. M. H. Wurtsbaugh is Secy. Board of Trustees.

Tex., Livingston.—\$17,000 road, street and school bonds are voted. Address The Mayor.

Tex., McDade.—Aug. 12 election is to be held in Oak Hill Dist. No. 11, Bastrop county, to vote on \$3000 \$100 denomination school bonds. Edgar Owen is Secy. Board of Education McDade. (Previously noted under date of Bastrop.)

Tex., Mineral Wells.—\$74,000 water bonds defeated.

Tex., Mineral Wells.—\$74,000 water bonds defeated. Joel D. Crawford is Mayor.

Tex., San Angelo.—Bonds for \$80,000 school building have been sold. Address School Board.

Tex., Seadrift.—Bids will be received until 1 P. M. Aug. 25 by W. J. Thomas, Prest. School Board, for \$17,500 5 per cent. 5-40-year school bonds, dated June 19, 1915. Denomination \$500. Further particulars will be found in the advertising columns.

Tex., Sinton.—\$75,000 road bonds Ingleside Road Dist. No. 3, San Patricio county, have been voted. It is stated that buyers are ready to accept bonds as soon as approved. Address M. A. Childers, County Judge.

Tex., Tahoka.—Lynn county has voted bonds for courthouse and jail. Address County Commrs.

Tex., Waxahachie.—Bids will be received until Sept. 1 by W. M. Tidwell, County Judge, for \$45,000 5 per cent. 10-40-year bonds Road Dist. No. 10, Ellis county, dated July 1, 1915; denomination \$1000.

Tex., Weatherford.—\$60,000 5 per cent. 10-40-year Parker county road-improvement bonds defeated.

Va., Fairfax.—Election is soon to be held in Dranesville Dist., Fairfax county, to vote on \$100,000 road bonds. Address County Commrs.

Va., Orange.—Election is to be held Aug. 31 to vote on \$10,000 bonds for water-works and improvements of streets. Address The Mayor.

W. Va., Janelew.—Election is to be held Aug. 23 to vote on \$15,000 10-20-year street bonds; denomination \$100 and multiples thereof, not exceeding \$500. Burket Hall is Mayor.

W. Va., Logan.—The \$300,000 Logan Dist., Logan county, road improvement bonds to be voted on Sept. 7 are 5-24-year 5 per cent. Address County Commrs.

W. Va., Morgantown.—Election is to be held in Monongalia county Sept. 18 to vote on \$300,000 Morgan Dist. and \$140,000 Union Dist. road-improvement bonds. Address County Commrs.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Exporting Steel Billets.

An order for several thousand tons of steel billets and rod for export has recently been secured by the Ashland Steel Co. of Ashland, Ky.

Secures Structural Steel Contract.

William B. Scalfie & Sons Co., Pittsburgh, Pa., has received a structural steel contract from the Paulton Coal Co., West Apollo, Pa., for a large steel frame tippie to replace one recently burned.

Kansas City Elevator Co. in New Location.

Kansas City Elevator Manufacturing Co., manufacturers of electric, hydraulic, steam and hand elevators, 113 West 19th St., Kansas City, Mo., announces the removal of its plant to 2901 3-5-7 Madison Ave.

Thomas Coupling Co. to Move.

After Sept. 1st The Thomas Coupling Co., Warren, Pa., will move its offices and plant to Troy, Pa. A new erecting shop is being constructed by the company at this point, and when completed, it is said, will contain the most modern and up-to-date plant of its kind in the country. Heretofore the company has specialized in the manufacture of shaft couplings, but with the new and enlarged quarters, the manufacture of the entire power transmission line will be taken up.

An Interesting Exhibit.

Among the many original exhibits at the Panama-Pacific Exposition, that of the Pittsburgh-Des Moines Steel Co. commands attention. As shown in the accompanying illustration, it consists of a vertical half section of one of its 50,000-gallon elevated steel tanks, mounted on short posts, and so arranged that all the fittings, such as expansion joint, riser pipe, mercury gauge, heater, balcony ladders may all be visible at close range, and their details and the workmanship of the structure in general carefully inspected. All the construction details can be seen in full size, as they are actually fabricated and erected in practice. These tanks are designed for municipal

Fire Brick Plant Enlarged.

Owing to the activity in the iron and steel industries, The Ashland Fire Brick Co., Ashland, Ky., has added 10,000 feet of floor space for drying and three kilns to its plant. This addition will increase the plant's capacity about 20 per cent.

Steel-making Machinery for Sale.

Beginning August 12 an auction sale will be held at the plant of the Independent Steel Co., Kenova, W. Va., of the machinery installed for that company and used for the year of its operation. About 3000 pieces in all, including wire, mill and spring machinery, tools, punches, lathes, planers, shapers, drills, rolls, gas engines, power transmission machinery, etc., will be sold.

Automobile Accessories.

Organization of the Carolinas Automobile Supply House, 221-223 North College street, Charlotte, N. C., has been effected for the purpose of conducting a wholesale automobile accessory business in North and South Carolina. Officers of the new company are: Jos. G. Fitzsimmons, president and general manager; Wm. A. Graham, vice-president, and Wade A. Montgomery, secretary and treasurer.

Navy Department Contracts.

The U. S. Navy Department has awarded to the International Oxygen Co. of New York the contract for the erection of a hydrogen plant for ballooning purposes at the Aeronautic Station of the navy-yard at Pensacola, Fla. This company has also received a contract from the Government for the installation of an I. O. C. System for generating oxygen and hydrogen at the Washington navy-yard, Washington, D. C.

General Purchasing Agency.

Howard S. Grimes, 429 Law Bldg., Baltimore, is conducting a general manufacturers' purchasing agency. Materials are bought for woodworking plants, cotton mills, carriage and wagon works, furniture factories, machine shops, offices, etc. Having been purchasing agent for the Crown Cork & Seal Co. of Baltimore for a number of years, Mr. Grimes says has enabled him to gain experience in a wide range of products by being in close touch with various manufacturers.

Sale of Brick Plant.

A modern brick-making plant, consisting of about 15½ acres of land, brick-making machinery (Freeze), dryhouse, five permanent kilns, etc., of the Valley Brick Co. will be offered for sale August 28, 1915, at Charles Town, W. Va. The plant is located at Ransom, a suburb of Charles Town, and is connected by switch tracks to the Baltimore & Ohio and Norfolk & Western railroads. Further details regarding the sale may be obtained by addressing H. V. Sheetz, trustee, Charles Town, W. Va.

Occupies New Plant.

Announcement is made that the J. S. Mundy's Engine Works, manufacturers of hoisting, mining and mud-dredging engines, electric hoists, mining machinery, steam boilers, derricks and pile drivers, Newark, N. J., is now moving into its new factory buildings. The main machine shop is of brick and steel construction, 90x300 feet, with 20-foot balconies on either side, and a 15-ton Nile crane spanning 50 feet. A railroad switch runs through the center of the building to facilitate transportation. With the larger buildings and better conveniences provided at the new plant, the present output can be doubled.

Phoenix Iron Works to Be Enlarged.

Permission having been granted the Phoenix Iron Works, Meadville, Pa., to increase its capital stock from \$200,000 to \$300,000, improvements to the plate or tank shop and the foundry and boiler departments, and additions involving the erection of a large new building, will be made. With the completion of the improvements it is expected that the payroll of the works will be in-

creased \$5000 a month, producing an output valued at \$500,000 annually. The Phoenix Iron Works was assisted in the enlarging of its plant by the Meadville Industrial Commission, which has agreed to take \$10,000 of the stock offered for sale.

Waterfront Property for Sale.

A tract of land, amounting to 171.38 acres, fronting on the deep waters of Bear Creek, within five miles of the eastern limits of Baltimore, will be offered for sale August 25, 1915, by Pattison & Gahan, auctioneers, Baltimore. Plat of the property may be had by application to the auctioneers, or to Willis & Willis, attorneys, 213 Courtland street, Baltimore.

Electric Hammers.

One of the new and special applications of electricity is shown in its use for operating electric hammers, now being marketed by the Western Electric Co., 463 West St., New York. It is said this electric hammer can be operated at a power cost ranging from 2 cents to 5 cents an hour, depending on the size of the hammer used, and with the low first cost combined with its ease of operation, makes its use advantageous and practicable. Companies installing switchboards, pneumatic tube systems, piping, railings, sprinkler systems, fire escapes, fire doors, etc., are reported to have been using electric hammers successfully. Paint mills use them for dressing mill stones, ice plants and central stations for chipping scale off condenser tubes, and, in fact, wherever a rapid succession of blows makes for saving, the electric hammer can be operated successfully.

Employees' Welfare Building.

In keeping with the policy adopted by many of the larger industrial concerns of late years in bettering physically, morally and socially their employees, the Reading Steel Casting Co. of Reading, Pa., has recently completed adjacent to its plant a club or welfare building costing over \$12,000. The building contains in addition to club, locker and bathrooms, where nearly all the men change their clothes to go to work, and when this work is done they take a shower-bath and redress, an emergency hospital equipped with first-aid appliances, a kitchen for use in preparing luncheons for different functions, and an assembly room which provides an excellent dancing floor. A sociability has been promoted among its employees, and the home is theirs not only during the day, but in the evening as well. In the building is also located the headquarters of the relief association, formed in 1916 by several of the company's employees. Since that time the association has grown steadily, and today every employee of the casting company, numbering from 230 to 250, is a member.

Adds Another Expert Engineer.

R. T. Stull has become associated with the Dunn Wire-Cut-Lug Brick Co. of Conneaut, O., as its ceramic engineer. In engaging the services of Mr. Stull the Dunn Company was influenced by a desire to give its licensees the benefit of the highest scientific assistance in perfecting the quality of their brick. This is an extension of the policy of the company as already developed in the maintenance of a corps of expert engineers who are supervising the constructional work. Mr. Stull is widely known as the author of numerous contributions to ceramic literature, as well as in practical and educational fields. He is a graduate of the department of ceramic engineering at the Ohio State University, 1902, and for five years was connected with various important ceramic industries as superintendent. Since that time he has been instructor in ceramics in the University of Illinois. At present Mr. Stull is vice-president of the American Ceramic Society; a member of the American Chemical Society; American Society for Testing Materials; National Brick Manufacturers' Association and the Illinois Clay Manufacturers' Association.

TRADE LITERATURE

Engraved and Stamped Letterheads.

A handsome portfolio containing samples of steel-engraved and steel-die stamped letterheads made by the Young & Selden Co., Baltimore, for Southern concerns, is one of the methods employed by this company to show the quality and variety of its products.

Electric Snap Switches.

A folder issued by the National Metal Molding Co. of Pittsburgh, Pa., illustrates and describes several lately developed clamp bushings and switch bases for electrical-wiring application. Among the special types

illustrated are single and double clamp bushings; corner, outlet, drop cord and junction boxes, and single and combination flush switch adapter and wall box.

Building Construction.

Stone & Webster Engineering Corporation of Boston has issued an attractive book describing pictorially numerous shops, factories, warehouses, mills, office, educational buildings, power stations, etc., which it has constructed in different parts of the country. The work includes a wide variety of construction problems which, in most instances, had to be met within brief time limits. This corporation makes a specialty of rapid work on plant extensions and additions.

Collapsible Tubing.

"Flexoid" collapsible tubing, which is designed for carrying fresh air into tunnel and shaft work and carrying fumes, is described in a folder issued by the Bemis Bros. Bag Co. of St. Louis, Mo. It is made of heavy canvas impregnated with a composition which is forced into and becomes part of the fabric, producing an air-tight, water-proof and fume-proof tubing. "Flexoid" is also used for temporary water diversion in bridge and culvert work. It is also furnished flat and in large sheets for covering new concrete work.

Berger Accessory Products.

A handy vest-pocket-size booklet, No. 894, covering the conductor-pipe and caves-trough accessory products of the Berger Manufacturing Co., Canton, O., is being distributed to the sheet-metal trade. The booklet has a substantial paper cover, is printed on good quality enamel paper, so that the details of the illustrations are brought out clearly. A brief, concise description of each article is given, with the latest list prices. This booklet, which will be sent to interested persons upon request, is convenient to consult and contains complete working information.

Seabury Marine Products.

Steam and gasoline yachts and launches, sail yachts and auxiliaries, steel and wooden vessels, house boats, etc., marine gasoline electric lighting sets, alcohol and coal-yacht ranges, are illustrated and described in a catalogue on "Speedway Products" of the Gas Engine and Power Co., and Charles L. Seabury & Co., Consolidated, Morris Heights, New York City. Seabury water-tube boilers for stationary and marine service and Seabury marine steam engines for commercial and pleasure craft are also illustrated and described in separate catalogues of the company.

Republic Rubber Goods.

An attractive 138-page catalogue, describing and illustrating its complete line of mechanical rubber goods, has recently been issued by the Republic Rubber Co. of Youngstown, O. Republic products listed include: Transmission, conveyor, oil well and other types of belting; garden, steam, water, air, acid, gas, coke, suction, fire, chemical, vacuum, sand-blast hose, etc.; molded goods, such as rubber pump valves, automobile, wagon and truck bumpers, rubber-covered rolls, tubing, mats and matting, rubber soles and heels, and automobile, carriage and truck tires.

Vertical Air Compressors.

Gardner-Rix vertical air compressors are illustrated and described in a circular issued by the Gardner Governor Co. of Quincy, Ill. The compressors are made in sizes from 6 cubic feet to 140 cubic feet capacities. Single cylinder, Class "G," with unloader and sub-base, duplex cylinder, Class "H," with sub-base, vertical high-speed compressor, motor driven by belt or geared connection, Gardner-Rix compressor geared direct to gasoline engine and a hand portable set of Gardner-Rix compressor with motor and air tank, etc., are included in the different types illustrated in the circular.

Book on Practical Mechanics.

Results of five years' experience in organization and development of a system of railroad-shop apprentice schools, as well as extended investigations of the work of public, private, trade, vocational and corporation schools of manufacturing industries and railroads in this country and abroad are said to be given in the book on "Practical Mechanics and Allied Subjects," by Joseph W. L. Hale, S.B., E.E., and published by the McGraw-Hill Book Co., Inc., 239 West Thirty-ninth St., New York. The material included

[Continued on Page 68.]



water service, railroad service, fire protection and special purposes, and range in size from the small 10,000-gallon roof tank for sprinklers to structures of over a million gallons capacity for large water systems. The manufacturer of these tanks was awarded the gold medal, the highest award made for this type of structure. Supplementing the exhibit is a large collection of photographs of completed structures, comprising water tanks, standpipes, wireless towers, coal stations, dredges, barges and structural steel buildings. The Pittsburgh-Des Moines Steel Co. has offices in Pittsburgh, Pa.; New York City, Des Moines, Ia.; Dallas, Tex., and San Francisco, Cal.

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[Continued from Page 65.]

In the book, which is divided into 20 chapters, each dealing with a definite subject, has been made sufficiently broad to apply not only to railroad schools, but it is believed, to schools in the mechanical trades generally. The price of the book is \$1.

Business Guidebook.

Several months ago L. F. Grammes & Sons, manufacturers of advertising novelties and etched brass signs, Allentown, Pa., established a complete business library for the use of its employees. In order that they might take a greater interest in the library, a book called "A Guide to a Business Education," which contains a detailed description of over 500 business books and a list of all business directories published in the United States and foreign countries, was published by the company for the free use of its employees. To those not connected with the company the price of the book is \$1.

Steam and Air Pressure Regulators.

Catalogue "H," issued by the Crane Co., Bridgeport Division, Bridgeport, Conn., illustrates and describes C. C. pressure regulators for reducing and regulating steam and air pressure. Analysis, uses and design of pressure regulators are discussed in the catalogue, together with a detailed description of the construction of C. C. regulators. Chart for determining the correct size of C. C. pressure regulator for steam service, table showing the volume and temperature of saturated steam at various gauge pressures and rules for determining the area of pipe in square inches to carry given quantity of steam at known velocity are also included in the catalogue.

Uses of Silicate of Soda.

With the hope that it may be of assistance to present investigators and to those who, in the future, will reveal further fields of service for silicate of soda, the Philadelphia Quartz Co., 121 South Third street, Philadelphia, Pa., has issued a booklet entitled "Silicate of Soda and Its Uses." The company states in order that its salesmen and chemical department may serve and not annoy, it is essential that information entrusted shall be held in confidence. Such uses of silicate as are based upon private processes are therefore not included in the survey. Description, manufacture, history, methods of shipment and commercial uses are each treated under separate chapters.

Aluminum Electrical Conductors.

Aluminum has for many years been used for electrical conductors in increasing amounts until it has become one of the standard materials for use in power transmission of various kinds. For the purpose of conveying to the public facts with regard to the properties of aluminum, together with the proper methods for its installation and use, the Aluminum company of America, Pittsburgh, Pa., has issued a comprehensive pamphlet. The subject is divided into the following parts: Properties of aluminum; properties of aluminum circuits; aluminum cable steel reinforced; accessories; manufacture and shipment; methods of installation; uses of aluminum conductors, and tables and useful data.

Bossert Redibilt Houses.

Latest and most improved bungalows, barracks, bathhouses, garages, churches, schoolhouses, hospitals, emergency buildings, railway stations, etc., of the "Redibilt" design produced by Louis Bossert & Sons, Grand St. and Newtown Creek, Brooklyn, N. Y., are illustrated and described in a catalogue issued by the company. For twenty-five years this company has manufactured portable houses for other selling agents, and it is now offering a new improved design manufactured under its own patents. Buildings now produced by the company are said to be complete in every detail, making them suitable for a winter or summer home without alteration or lining of any kind. The entire structure is made of sections just large enough to conveniently handle and erect, and all sections are interchangeable.

Fireproof Qualities of Terra-Cotta.

In the August number of the monthly publication issued by the Atlantic Terra Cotta Co., 1170 Broadway, New York, the principal article treats on the fireproof qualities of terra cotta. In the discussion it is brought out that in general conflagrations, such as the fire disasters of San Francisco and Baltimore, there were many instances where fire had passed through a building, gutting it entirely, without damaging exterior walls of Atlantic terra cotta. The rest of the publication is devoted to illustrations of recently-erected hotels that have

used Atlantic terra cotta in their construction, such as the 11-story Paso Del Norte, El Paso, Tex., the 22-story McAlpin, New York; the 14-story Fontenelle, Omaha, Neb.; the 12-story Statler, Buffalo, N. Y., and the 20-story Adelphia, Philadelphia, Pa. Southern branch of this company is known as the Atlanta Terra Cotta Co., with offices at Third National Bank Building, Atlanta, Ga.

Valley Iron Works Publications.

Fuel-saving appliances, Locomotive steam engines and shafting appurtenances manufactured by the Valley Iron Works, Williamsport, Pa., are described in separate catalogues. One of the catalogues is a treatise on how coal can be burned to secure greatest economy, smoke prevention and ease with hand firing, including a discussion of how Ajax grates accomplish these results, and a description of Ajax shaking and dumping grates, standard taper grates, competition grates, standard circular grates, etc. The Locomotive Bulletin, in addition to describing and illustrating the Locomotive steam engine in detail, contains tables and general information of interest to power users. The Locomotive engine is said to possess a design that readily appeals to engineers and mechanics, not alone on account of its grace, but rigidity and compactness. Illustrated Catalogue No. 107 is devoted to shafting appurtenances and contains price-lists and tables.

Emerson Steam Pumps.

In order to give, in a brief and concise manner, evidence and facts regarding its products, a catalogue has been compiled and recently issued by the Emerson Pump and Valve Co. of Alexandria, Va. This company manufactures steam pumps in all sizes, foot valves and quick-cleaning strainers adapted to all makes of pumps. Emerson steam pumps are claimed to embody, with marvelous simplicity, the greatest efficiency with the least cost. Operation of the pump is accomplished by condensation of steam, creating a vacuum, which is said to produce a steady flow, ranging, according to the size of the pump, from 200 to 3000 gallons per minute. Advantages claimed for this type of pump are that it will operate completely submerged and that it will pump water containing large quantities of mud, sand and grit. The company states that the utmost care has been taken to make the catalogue as complete and comprehensive as possible, in both description and illustration of its products.

De Laval Blowers and Compressors.

Centrifugal blowers and compressors for all pressures from 5 inches of water, as in mechanical-draft service, up to 125 pounds per square inch, as for compressed air distribution in mines, machine shops, shipyards, etc., are described in the 64-page catalogue "F" issued by the DeLaval Steam Turbine Co. of Trenton, N. J. Numerous charts are given showing curves for the isothermal, adiabatic and actual compression of air, also the theoretical power required to compress air and characteristic curves of single and multi-stage blowers and compressors. Particulars are given concerning the application of centrifugal blowers and compressors to forced draft, coal-gas manufacture, coke-oven plants and water-gas plants, sugar factories, cupola and blast-furnace work, Bessemer converters, supplying compressed air in mines, shipyards, etc. The illustrations present numerous examples of blowers and compressors directly connected to steam turbines and to electric motors. The catalogue will be sent to interested persons upon request.

McFell Fire Alarm Systems.

Apparatus used in connection with the McFell fire-alarm system is described and illustrated in a folder issued by the McFell Signal Co., Halsted and Twenty-ninth Sts., Chicago, Ill. The system is said to involve a new design and operates as follows: The circuit control consists of an electro-magnetic device, which keeps the circuit under constant tests through a three-milliamper discharge. The code wheel of the fire-alarm box closes and opens a circuit, causing bells to sound the box number three times. The circuit on the switchboard is so arranged that if a break occurs anywhere in this system, accidentally or maliciously, a drop in voltage, or a complete failure of battery, it will instantly cause the operation of the trouble alarm, which continues until the trouble is attended to. The constant test of the circuit is one of the important features of the McFell fire-alarm system. A combination fire-alarm and watchman service is also manufactured, together with special electrical equipment for department stores, hospitals, factories, railways, hotels, banks, schools, offices, etc.



The New York State Highway Commission is building \$50,000,000 worth of roads, using Tarvia in enormous quantities. This shows a stretch of State Highway at Rome, N. Y.



There are many miles of these beautiful, model, tarviated roads in Washington. This is the White House Driveway, tarviated in 1911.



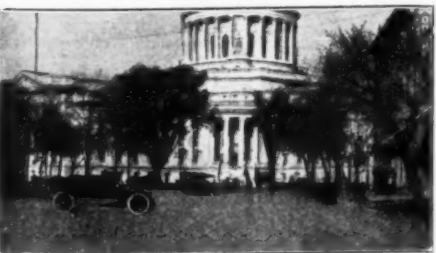
One of Cleveland's best residential streets (Bellflower Road), bonded with Tarvia in 1905. The photograph shows its condition in 1915 after 10 years' service without repairs!



This road in Newton, Mass., is the heaviest travelled automobile route out of Boston. Nine years ago it was tarviated at a cost of 14c. a yard, 5 miles, 60 feet wide, and is in fine condition today.



At Forest Hills, L. I., the Sage Foundation has invested its funds in a remarkable, model suburb built on "Garden City" principles. In 1910 the engineers built all roads with Tarvia and use Tarvia regularly for maintenance.



Ever since 1908 Madison, Wis., has been using Tarvia every year in increasing quantities, converting its dusty, plain macadam roads into less expensive, dustless, tarviated macadam.



Plainfield, N. J., now has 36 miles of well-kept, tarviated roads like this, the result of a consistent and economical policy inaugurated in 1908.



Every foot of this forty-mile boulevard between Washington and Baltimore is made automobile-proof with Tarvia. The greater portion of the twenty-eight mile Baltimore-Annapolis Boulevard is also tarviated.



The Morman-Coulee Road, near La Crosse, Wis., was satisfactorily tarviated last year for six miles at a cost which was speedily repaid by the resultant savings in maintenance. For rural highways Tarvia is ideal.



From Portsmouth, N. H., through various towns to Kennebunk, Me., this favorite automobile road runs for 20 miles, all treated with Tarvia.



This Tarvia road at West Lafayette, Ind., was 10 feet under water in the floods of 1913, but that didn't hurt it a bit. The arrow shows high-water mark.



The State Superintendent of Highways in New Hampshire thought \$500 a mile a reasonable maintenance cost for certain roads, but the City Engineer in Laconia demonstrated that these fine surfaces could be had for \$170 a mile—with Tarvia.



A section of this road at St. Joseph, Mich., was treated with oil and another section with Tarvia. After a year's wear the oil treated section has been worn down 2 inches below the Tarvia. Tarvia adds years to the life of any macadam road, as this experience proves.

TARVIA roads are not an experiment—they are well and favorably known in hundreds of towns throughout the country. Some of them are illustrated herewith. If you will read the comments under the photographs—we are sure you will find them very interesting.

Taxpayers in these communities are favorable to the use of Tarvia because it relieves them from the dust nuisance and gives them clean, easy-traction, automobile-proof highways.

Tarvia

Preserves Roads
Prevents Dust

The use of this material in road construction is also a real economy, because *the reduction in maintenance expense more than offsets the original cost of the Tarvia.*

Tarvia roads are an asset to the community. They invariably mean—increased property values, more accessible markets and reduced transportation expenses.

As more and more taxpayers realize that at practically no extra expense they can secure waterproof, dustless and automobile-proof roads, more and more towns will build most of their highways with Tarvia exclusively.

Illustrated booklet on request

Special Service Department

This Company has a corps of trained engineers and chemists who have given years of study to modern road problems. The advice of these men may be had for the asking by anyone interested.

If you will write to the nearest office regarding road problems and conditions in your vicinity the matter will have prompt attention.

BARRETT MANUFACTURING COMPANY

New York Chicago Philadelphia Boston St. Louis
Cleveland Cincinnati Pittsburgh
Detroit Birmingham Kansas City
Minneapolis Salt Lake City Seattle
THE PATTERSON MFG. CO., Limited: Montreal Toronto
Winnipeg Vancouver St. John, N. B.
Halifax, N. S. Sydney, N. S.

Classified Opportunities

MINERAL AND TIMBER LANDS WATER POWERS MISCELLANEOUS PROPERTIES

WE HAVE SOME LAND suitable for steam shovel work, also land for deep mining. Would lease or sell. Miller Bros., Mulberry, Kans.

ATTENTION—MINERAL LANDS.—Zinc, lead and coal acreage; location, coal, 60,000. Southern Illinois; zinc and lead, Missouri and Arkansas, 4000 acres; can show you ledges of the real product; located near R. R. Have the above propositions from first party. Takes money to talk; no hot air. Very cheap. S. J. Burkitt, Moweaqua, Ill.

HAVE YOU A VALUABLE PROPERTY FOR SALE? Farm, timber land, mineral property or any other? We can help you get in touch with possible purchasers by an advertisement in these columns. For rates see head of this department.

OILSTONE QUARRY

FOR SALE OR LEASE—Oilstone quarry and rock-crushing plant on Randle street, this city; quarry and plant in good condition for operation; finest bed of oilstone in county; good sale for crushed rock in city; a money-making opportunity for practical man. R. L. Millsaps, Hot Springs, Ark.

COAL LAND

2000 ACRES of Coal Lands for sale on head of Kentucky River, the Big Elkhorn. Seams of coal six to nine feet thick. Also 200 acres near head of Rockhouse Creek; same county; same coal; four to six feet. Address J. H. Frazier, Whitesburg, Ky.

COAL AND TIMBER LANDS

FOR SALE—912 acres coal and timber land in Harlan county, Kentucky, fronting on Louisville & Nashville Railroad; timber estimated by an expert at 5,000,000 feet; eleven seams of coal from 3½ to 8½ feet above water level; the 8½-ft. seam within 400 feet of railroad track. Would be glad to show property to any prospective purchaser. Address C. A. Vance, P. O. Box No. 144, Wise, Virginia.

COAL MINE

FOR SALE—A coal property in West Virginia, operating the Eagle and Island Creek seams, containing 9,000,000 tons; present annual capacity, 200,000 tons. Address A. C. B., 608 Century Bldg., St. Louis, Mo.

FOR SALE—Valuable coal-mining property within three miles of a city of 22,000 population, electric railway connection; big tipple in the city; freight rate, 25c. per ton; 400 acres of rights; 87 acres in fee; houses for 15 families; top equipment can take care of 500 tons per day. Will sell for one-half the price paid for the property five years ago. Mine now in operation. T. A. Pedley, Receiver, Owensboro, Ky.

TALC MINE

AN unusual opportunity to secure interest in splendidly located, exceedingly rich talc mine. Will also lease on royalty. For further particulars and samples address, A. Pipinos, Box 307, Tarpon Springs, Fla.

ZINC AND LEAD LANDS

FOR LEASE—Three bodies of zinc land—two in Newton county, one in Boone county. For particulars address, Rev. W. T. Allan, Harrison, Boone Co., Ark.

FOR LEASE—120 acres near Yellville, Marion county, Arkansas; good wagon road; zinc shown up; fine strike recently adjoining lands; very favorable lease to responsible persons. Have developed zinc mines now in operation in Rush District at very favorable prices. Fredricks, Springdale, Ark.

RICH ZINC AND LEAD LANDS FOR SALE in Boone, Marion, Newton counties, Arkansas, and Taney county, Missouri; 3384 acres selected 15 years ago in the richest mineral belt by competent prospector and experienced zinc miner. Address C. M. Fenton, Zinc, Arkansas.

POLES AND PILING

FOR SALE—White cedar poles from twenty-five to sixty feet, with 6", 7" and 8" top. Walton & Nixon, Vilas, Fla.

TIMBER

REAL TIMBER BARGAIN—50,000,000 ft.; 70% N. C. pine, poplar and cypress, all original growth; on Southern R. R. in South Carolina. Liberal terms and low price. J. P. Mulherin (owner), Augusta, Ga.

FOR SALE—Cutting rights over 180,000 acres of easily worked, accessible forest land; 60,000 acres heavily timbered, and 40,000 acres very heavily timbered, averaging over 35,000 super-feet to acre. A total of over 1,600,000,000 super-feet of first-class hard and soft woods. Inspection by expert cruisers is solicited. For further particulars apply to F. W. Frankland, Marguerite Place, Lake Charles, La.

RATES AND CONDITIONS

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 25 lines. In estimating the cost, allow seven words of ordinary length to a line. When the advertisement contains a number of long words, proper allowance should be made. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year as follows: 100 lines, 18c. per line; 300 lines, 16c. per line; 500 lines or more, 15c. per line.

SIX MILLION FEET of hardwood timber for sale in ten miles of Macon, Ga. Touches the Southern Railroad. Price \$2500. Address Box 393, Macon, Ga.

TIMBER LAND

FOR SALE—Two Florida yellow pine limits and turpentine producers for quick sale at a bargain. Will stand all investigations. L. N., Box 596, Buffalo, N. Y.

FOR SALE—Several desirable pieces of timber at bargain prices. If you are in the market and want a money-maker, write George J. Philip, Box 42, Oil City, Pa.

FOR SALE—8000 acres of virgin timber, estimated by expert to cut forty million feet merchantable lumber, mostly oak, six miles from railroad. This is an exceptionally fine tract of timber; never had an ax in it. Price \$22 per acre, land and timber. Richardson & Martin, Tullahoma, Tenn.

FARM AND TIMBER LANDS

WRITE FOR OUR new booklet containing Virginia farms, large and small, and timber investments. Virginian-Seaboard Realty Co., Alberta, Va.

FRUIT, FARM AND TRUCK LANDS

THESE COLUMNS ARE CLOSELY READ BY PEOPLE for information of all kinds about Southern properties of every description. If you have a property of any kind that you want to dispose of, try an advertisement in these columns. Others have to their advantage. For rates see head of department.

ALABAMA

FOR SALE—If you want a cheap farm, write us. We are locating homeseekers in this section. The greatest opportunities left in farms. Address Fayette Banner Real Estate Co., Fayette, Ala.

ARKANSAS

BUY A FARM from the Farmers' Union Club around Sitka, Ark., 6 miles from Willford, 15 miles from Memphis, Tenn. R. L. Higginbottom, Manager, Sitka, Ark.

FOR SALE—By owner, 460 acres gently rolling upland; convenient and healthy location; 3 sets improvements; fine water; will divide; also other land, R. P. Rowley, Carlisle, Ark.

FLORIDA

FREE—William L. Larkin's booklet, "The Truth About Florida," with a six-months' subscription (at one-half regular rates) to The Indian River Farmer. Fruit growers, truckers, general farmers, folks interested in Florida, send 25c. to The Indian River Farmer, V-1, Vero, Fla.

TEN THOUSAND ACRES best farm and fruit land in Polk county, Florida; on railroad within five miles Lakeland. Price, ten dollars per acre. Address G. C. Rogan, 1 and 2 Deen-Bryant Bldg., Lakeland, Fla.

CHOICE citrus and truck lands for sale in the Manatee River section of Manatee County, Florida; also water fronts. Send for soil survey report and views. Manatee River Land Co., Inc., 101½ Franklin St., Tampa, Fla.

BEST BARGAINS in FLORIDA.—15,000 acres, part in cultivation; 30 miles from Jacksonville; accessible by rail, water and automobile; clay subsoil; flowing artesian wells; pecan trees; must be sold; \$4 per acre in bulk. L. S. Chadwick, Jacksonville, Fla. Also, rich phosphate and timber lands.

WE were the original Northern promoters of Florida land in a wholesale way, and still own and control 400,000 acres. Attractive prices and terms to responsible people; references exchanged. We can help you make money. Write us for our wholesale booklet. Thompson & Jackson, Toulon, Ill.

FOR SALE—FLORIDA—Charming home, partly furnished, between 3 spring-fed lakes; 42 acres, 20 of which is in young citrus grove; 3000 boxes fruit last year; new modern buildings; pneumatic water system; 2½ miles from Orlando, 8000 inhabitants; 2 railroads; will sell for less than cost (\$8,000). Cash or terms; no trade. Mrs. Helen Ensign, Orlando, Fla., owner.

FOR SALE—At Johnstown, Bradford Co., Fla., ten-acre truck farm; excellent rolling land; mile from railroad; good water, schools, market; 7-room house, partly finished, built 1914; \$700. Address Mrs. Annett, Cedar Bluff, Miss.

FLORIDA.—8000 acres cut-over land lying between Lake Crescent, Lake Louise and Lake George, in Putnam and Volusia counties, traversed by main line of A. C. L. Railway; large portion especially adapted to orange and grapefruit culture; balance finest potato and general farming land; lands all around selling \$20 to \$100 per acre. My price, \$10 per acre in a body; terms. Correspondence solicited. Chas. A. Brown, Jr., 30-31 Buckman Building, Jacksonville, Fla.

GEORGIA

FARMS FOR SALE.—Southwest Georgia farms; wonderfully fertile; 10 acres up; \$10 up. Also stock farms. Open grazing entire year. Farmers' Land Loan & Title Co., Albany, Ga.

LOUISIANA

FOR SALE—Paper-shell pecan orchard; 45½ acres; best grafted varieties, coming into bearing; in the famous Louisiana alluvial section; half mile from depot; on public road. Price right. Reasonable terms. Write owner, J. T. McKinnon, Siloam Springs, Ark.

MISSISSIPPI

MISSISSIPPI FARMS.—Improved; 90 farms, 10,000 acres to select from (bulletin free); worth investigating. Barbour, Enterprise, Miss.

NEW MEXICO

WHY NOT, if any of your family has tuberculosis, go to the land of sunshine and health, where you can make a good living and get well at the same time? Have a good farm near good railroad town in the wheat belt of New Mexico. Will trade you for what you have. Arthur Johnston, Box 1382, Dallas, Tex.

SOUTH CAROLINA

WELL-EQUIPPED OIL MILL AND GINERY for sale, located at Troy, South Carolina; also six tracts of land cheap in Edgefield and Saluda counties, S. C. A. S. Tompkins, Edgefield, S. C.

TENNESSEE

42-ACRE FARM for sale for \$2250; plenty of buildings, lots of strawberries and apples; good state of cultivation. F. W. Alabau, owner, Portland, Tenn.

VIRGINIA

COME TO VIRGINIA.—To close an estate, will offer for sale September 1, 1915, splendid farm of 240 acres, with magnificent bearing orchard of 800 Albemarle pippin and winesap trees, located in heart of Albemarle pippin district; elegant mansion-house and all necessary equipment.

Also an orchard of 1000 Albemarle pippin and winesap in full bearing. For full particulars address J. L. Goodloe, Administrator, Onan, Nelson County, Va.

ESTABLISHED 1893.—From long experience we are thoroughly familiar with lands and values and have some genuine bargains listed. Tell us what you want and let us submit some special offerings. Southern Farm Agency, Lynchburg, Virginia.

VIRGINIA ESTATES.—Colonial homes, plantations, farms, suburban homes, Albemarle pippin orchards, timber lands. Write us for what you want. We have it. R. N. Flanagan & Co., Charlottesville, Va.

WEST VIRGINIA

WANTED—Purchaser for bluegrass farm in bluegrass section of West Virginia; directly on railroad and river; 960 acres; 300 acres in sod; 300 acres additional can be put in sod at small expense; 200,000 ft. merchantable timber; 20,000 cords extract wood with nearby market and thousands of railroad ties and mine timbers. Limestone soil, with bluegrass spontaneous growth. Price reasonable. For particulars address No. 1804, Manufacturers Record, Balto., Md.

RESIDENCE FOR SALE

A SPLENDID RESIDENCE PROPERTY, brick, with garage, over 15 rooms, 2 bathrooms, 2 hot-water heaters, natural gas, modern elegant woodwork, large spacious rooms, beautiful mantels, Georgia fireplaces, on best residence street, directly opposite one of the best streets; could not be duplicated for less than \$15,000. Located in Jamestown, N. Y., 1400 feet above sea level. Will exchange for unencumbered timber or coal lands in the South, or manufactured lumber. "Fairmount," 57 Fairmount Ave., Jamestown, N. Y.

INTEREST IN COAL MINING COMPANY FOR SALE

VALUABLE INTEREST in one of the best coal works in the Pocahontas field. The unprecedented large increase in the export business will make this stock worth several times the price asked for it. Works are operating every day. Address "Fairmount," 57 Fairmount Ave., Jamestown, N. Y.

BUSINESS OPPORTUNITIES

WANTED—Plantations, timber, coal and mineral lands, manufacturing, business and investment properties, city and country, in exchange for other properties; have constant demand, also some cash buyers. Send full details. Arthur M. Connor, Oxford Bldg., Washington, D. C.

WANTED—Manufacturer of ability to join in making stock sizes short-leaf yellow pine doors and sash. Jobbing connections will take greater part of output. Address No. 1798, care Manufacturers Record, Balto., Md.

FOR SALE—A well-established contracting and building business, including equipment; business incorporated; annual business for past 3 years between \$65,000 and \$75,000 per year. If interested, our books will show the amount of dividends or profits made by the company in this time. Have \$30,000 worth of work contracted for at this time. This is an unusual opportunity. Investigate. Write J. Box 91, Cumberland, Md.

WE specialize in finding for manufacturers the location and size of plant suited to their particular needs, including labor market and freight conditions.

Our list of such properties is one of the largest, and some are exceptional bargains.

Write us just what you want and we will furnish it without expense to you.

J. JULIAN HALL,
18 BROADWAY,
N. Y. CITY.

Large business concerns bought and sold without publicity.

\$75 CLEARED \$112.50 in three months selling adjustable form units for building concrete culverts. You can do the same. Write before someone else gets your territory and find out how it was done. Frick Manufacturing Company, Fricks, Pa.

BEST YET; nothing like it on market; every lady wants it; great profit; fastest selling this by mail; will sell copyright on royalty; reason, other business. Free particulars. Clark Downey, West Point, Ga.

WANTED—A practical soap maker who desires to go in business for himself; must have \$5000 in cash to invest. For full particulars address Chas. J. Ackrill, P. O. Box 1025, Tampa, Fla.

MANUFACTURING PLANT using lumber and veneer wishes a location in which additional capital can be obtained; can partner with services. Address No. 588, care Manufacturers Record, Balto., Md.

EFFICIENCY DEVELOPMENT

SCIENTIFIC EFFICIENCY DEVELOPMENT—The world's crying need; the final solution; the now famous "Red, White, and Blue" Bulletin 831; not elsewhere obtainable; 25c. postpaid. Efficiency Development Corporation, Drawer 1550, Philadelphia, Pa.

AUTOMOBILE ELECTRO-INDICATOR

AUTOMOBILE ELECTRO INDICATOR, automatic, gasoline, oil, water, temperature, one dial. N. J. Nessa, M.D., Sioux Falls, S. D.

REPORTS AND INVESTIGATIONS

ACCURATE political, financial or miscellaneous reports and intelligent investigations of any character in Birmingham, Alabama, and surrounding towns. The performance of your commissions solicited. References. P. O. Box 597, Birmingham, Ala.

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